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# School buses for students supporting seniors

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*Boston University*

BOSTON UNIVERSITY  
SARGENT COLLEGE OF HEALTH AND REHABILITATION SCIENCES

Doctoral Project

**SCHOOL BUSES FOR  
STUDENTS SUPPORTING SENIORS**

by

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## **DEDICATION**

I would like to dedicate this work to my Mom and Dad, who  
gave me a solid moral compass, a strong work ethic,  
wings to fly and the unconditional love of  
the best family anyone could have.

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*I'm grateful, appreciative, and humbled to be surrounded by bright, creative, caring and supportive people not just for this journey but for those before and those yet to come.*

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**ABSTRACT**

School Buses for Students Supporting Seniors (SBFSSS) is an intergenerational program which utilizes school buses to transport high school students to visit homebound seniors for engagement in common occupations. It addresses current issues of social isolation of aging in place seniors and age-segregation communication of cell phone using teens.

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## LIST OF ABBREVIATIONS

AOTA.....	American Occupational Therapy Association
BADLS.....	Basic Activities of Daily Living
CDS.....	Child Development Supplement
COTA.....	Certified Occupational Therapy Assistant
IADLS.....	Instrumental Activities of Daily Living
M.A.N.E. ....	Mature Adults Nurturing Education
MEPSI.....	Modified Erikson Psychosocial Stages Inventory
MOHO.....	Model of Human Occupation
MtF.....	Monitoring the Future
NASSP.....	National Association of Secondary School Principals
OT.....	Occupational Therapy
OTR.....	Occupational Therapist, Registered
OTs.....	Occupational Therapists
PBS.....	Public Broadcasting Service
POTA.....	Pennsylvania Occupational Therapy Association
PSID.....	Panel Study of Income Dynamics
PTG.....	Parent Teacher Group
RCT.....	Randomized Controlled Trial
REPRIN.....	Research on Productivity Through Intergenerational Sympathy
RSVP.....	Retired Seniors Volunteer Program
RTMSD.....	Rose Tree Media School District



RWJF.....	Robert Wood Johnson Foundation
SBFSSS.....	School Buses for Students Supporting Seniors
SCORE.....	Service Corps of Retired Executives
WFOT.....	World Federation of Occupational Therapists
WHO.....	World Health Organization
WONCA .....	World Organization of National Colleges, Academies of Family Physicians
YRBSS.....	Youth Risk Behavior Surveillance System

## **CHAPTER ONE - Introduction**

### **Section One**

Teenagers and senior citizens: these two generations are part of concurrent societal trends and are affected with similar subsequent issues. With respect to senior citizens (seniors), the 2016 Population Reference Bureau reports that the “number of Americans ages 65 and older is projected to more than double from 46 million today to over 98 million by 2060;” this would then represent 24 percent of the population, an increase from 15 percent (Mather, 2016). In addition, according to the popular AARP report, older adults want to stay in their own homes to “age in place” (Barrett, 2014). Occupational therapists (OTs) are distinctly unique in addressing both the physical and socio-emotional well-being of seniors aging in place. As specialists in environmental/home modifications, OTs enable older adults to safely perform their basic and instrumental activities of daily living (BADLs, IADLs) occupations, maximizing independence. Environmental modifications, adaptive equipment and compensatory strategies are interventions OTs employ to insure an enabling physical context for maximal occupational performance.

However, enabling older adults to physically remain in their own homes can also be disabling, if social participation/occupation is not also addressed. As functional mobility decreases and the ability to drive is lost, the difficulties in maintaining social contacts and participating in valued community activities are realistic concerns of those older adults aging in place. The natural attrition by the passing of friends and family members contributes to further social isolation. Blanchard (2013) states that (physical)

aging in place “makes meaningful connection with others difficult, if not impossible.”

An example of this dichotomy of aging in place can be seen in year-long study in California in which a community of individual home owners/residents chose to have vetted home and transportation services, along with some planned social activities (Graham, Scharlach, & Kurtovich, 2016). Despite having home modification needs met, these seniors reported a decrease in social contact and healthcare visits also increased (Graham, Scharlach, & Kurtovich, 2016).

Social isolation and loneliness are detrimental to health and well-being. In two large studies (n= 6,500 and n= 16,849), social isolation and loneliness were associated with mortality (Step toe, Shankar, Demakakos, & Wardle, 2013) and were shown to be a predictor of mortality, similar to smoking for example, respectively (Pantell, Rehkopf, Jutte, Syme, Balmes, & Adler, 2013).

Social participation is a primary occupation which OTs can uniquely address in their holistic view of a person’s overall health and well-being. OTs analyze occupations within their multi-contexts. For seniors aging in place, addressing socialization occupational needs in the home environment are distinctly within the domains of OT practice. To deny access for engagement in social occupations due to limited mobility or homebound status, is an occupational injustice.

Concurrently, the teenage generation is experiencing a growing societal trend as well. With the rise of available communication technology, teens are spending more time using screen and mobile media. Common Sense Media, in a 2015 nationwide survey, reported that “on any given day, American teenagers (13- to 18-year olds) average about

nine hours (8:56) of entertainment media use, such as on-line videos and movies, video/mobile games, social media, internet use, and music (Common Sense Media, 2015, p.13). This time can be concurrent, as in multitasking. Watching television and gaming on the phone for an hour each is calculated as 2 hours. 70% of teens check social media multiple times a day (an increase from 34% in 2012), primarily using Instagram and Snapchat, and with a preference of texting over talking (Common Sense Media, 2018).

While research about the beneficial and detrimental effects of information and entertainment technology on teens is bountiful, it is objectively clear from the above statistics that today's generation of teens are spending a significant amount of time involved in virtual occupations alone or with each other. A consequence of this teen trend is decreased time with parents/adults, and increased peer cohesiveness (Lee, 2009; Subrahmanyam, & Greenfield, 2008). Common Sense Media (2018) reports increased peer cohesiveness as a benefit derived from increased screen time. However, Strom and Strom (2015) report that feedback and problem solving from the teens' own cohort, represent a narrowed view, and limit that which comes from adults. Strom and Strom (2015) label this teen phenomenon as "age-segregated" communication. Longer term consequences may be reduced communication skills required for entry in the workforce, where teamwork is necessary with other generations (Fischer, 2013). Decreased psychosocial well-being (Twenge, Martin, & Campbell, 2018) has also been correlated to increased screen time. Yet, others specify conditions or for what specific teen populations, there are consequences, and for whom, there are benefits (Common Sense Media, 2018).

Occupational therapy helps others to achieve engagement in meaningful occupations for health and well-being; “the extent to which a person is involved in a particular occupational engagement is also important. Occupations can contribute to a well-balanced and fully functional lifestyle or to a lifestyle that is out of balance and characterized by occupational dysfunction” (AOTA, 2014, pg. S6). Occupational therapy can distinctly address occupational balance for the health and well-being of teenagers primarily engaged in age-segregated communication patterns.

Both generations of seniors and teenagers are experiencing the effects of current social trends. Both are experiencing a type of isolation or segregation, impacting their social participation/relations occupations with others. This doctoral project, School Buses for Students Supporting Seniors (SBFSSS), is an intergenerational program, designed to meet the psychosocial, health and well-being needs of both homebound seniors who are socially isolated, and teenagers engaged in age-segregated communication. In this manner, SBFSSS advocates for the health and wellness at a community level.

SBFSSS is a unique, intergenerational program managed by an occupational therapist, in which school buses transport supervised high school students to the homes of seniors aging in place for mutually respectful, learning about each other, social visits. The basis for appropriate matching and subsequent visits of students and seniors is common, valued occupations. Some examples may be: reading or discussing books, conversing in a foreign language, sharing art/photography, playing musical instruments, discussing politics, cooking, etc.

Intergenerational programs have been shown to be beneficial to both the younger

and older generations. Positive qualitative outcomes for senior participants, demonstrated in many studies include: reduced feelings of social isolation and loneliness (Nicholson & Shellman, 2013; Bullock & Osbourne, 1999), sense of purpose and meaning in life (Chippendale & Boltz, 2015; Gruenewald et al., 2016; Herrmann, Sipsas-Herrmann, Stafford, & Herrmann, 2005), better health and well-being (Bullock & Osbourne, 1999; Murayama et al, 2014; Souza, 2003; Souza & Grundy, 2007; Teater, 2016), improved mood and attitude, and improved understanding of the younger generation (Bullock & Osbourne, 1999; Cohen-Mansfield & Jensen, 2016; Souza, 2003; Souza & Grundy, 2007).

A typical benefit of intergenerational programs for youth is the improved perception and knowledge about aging (ageism), a decrease in stereotypes and an increase in respect and empathy (Bullock & Osborne, 1999; Souza, 2003; Thompson & Weaver, 2015). Two randomized controlled intergenerational studies, one in the U.S. (Rebok, 2004) with 1,194 students, and one in Brazil (Souza & Grundy, 2007) demonstrated improvements in academic scores, behavior issues and better health, respectively.

As an intergenerational program, SBFSSS aims to produce similar positive effects for both seniors and teenagers. The projected outcomes of SBFSSS are improved knowledge and respect of other generations, reduced social isolation of seniors, increased non-peer communication of students, and improved health and psychosocial well-being of all participants.

The design of the SBFSSS program addresses components missing from other

intergenerational programs reviewed in an extensive literature search. For example, the use of pre-matched common occupations between senior and student is meaningfully uniquely OT and unique to SBFSSS. Taking community social activities to the homes of seniors is uniquely different from many intergenerational programs which require seniors to travel to the local community center or to schools to meet with youth. SBFSSS home visits are of a purely psychosocial nature, which is very unique since typical non-familial visits to homebound seniors tend to be of a clinical, medical nature with home health services; as of 2018, Medicare continues to not provide coverage for OT initiated home services (skilled nursing, speech or physical therapy must open perform the start of care visit), and will cover skilled OT services for illness or injury, conditions of a medical model (Home Health Basics, n.d.), not of a purely psychosocial nature.

For comparative analyses, no other intergenerational home visit studies have been located, in which high school students have been transported to the homes of homebound seniors for one to one, social visits based on common valued occupations. All of these reasons are what makes SBFSSS unique. The projected positive outcomes of SBFSSS will help contribute to social capital, where the trust, communication, and cooperation between generations extend to the common good of the community.

The implementation and projected success of SBFSSS within a local school district will provide the model from which other school districts can follow, effecting change exponentially. Seniors aging in place, teenagers using cell phones and school buses are all found nationally. The benefits of a SBFSSS program can address one of the goals of the federal government publication, “Healthy People 2020 ... to improve the

health of all groups; create social and physical environments that promote good health for all; and promote quality of life, healthy development, and healthy behaviors across all life stages” (U.S. Department of Health and Human Services, n.d.).

As SBFSSS aligns with the health concerns of our nation, it also validates the American Occupational Therapy Association’s (AOTA’s) mission to “link the value of occupational therapy to the needs emerging within the greater health care system” (Lamb & Metzler, 2014, p. 9-10). As our nation continues to struggle with healthcare reform, AOTA President Amy Lamb further highlights the triple aim of any system of healthcare reform as to: 1) improve quality 2) improve efficiency and 3) reduce healthcare costs (Lamb, 2017).

The benefits of implementing SBFSSS directly align with these triple aim priorities of our national healthcare system and the AOTA: improving engagement in social occupations by taking high school students/teenagers to visit with homebound older adults aging in place is improving quality care, health and well-being for both generations. Using transportation vehicles (school buses) that are only used at school pick up and return times, and that are already funded for by the school tax dollars paid by residents (seniors and student families) of the school district. is improving efficiency of care. Improving health and well-being with people interaction (seniors and students) and meaningful occupations, is ultimately reducing health care costs, improving cost effective care.

Seniors aging in place, teenagers using cell phones and school buses are also found globally. The psychosocial well-being benefits of a SBFSSS program



implemented on a global level definitively align with the following principles of the Constitution of the World Health Organization (WHO): 1) “health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, 2) The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition, 3) The achievement of any State in the promotion and protection of health is of value to all, 4) Healthy development of the child is of basic importance; the ability to live harmoniously in a changing total environment is essential to such development, 5) The extension to all peoples of the benefits of medical, psychological and related knowledge is essential to the fullest attainment of health, and 6) Informed opinion and active co-operation on the part of the public are of the utmost importance in the improvement of the health of the people” (World Health Organization, n.d.).

SBFSSS is an example of a “think globally, act locally” wellness program. Its value and importance using current resources: people, occupations and school buses cannot be underestimated.

## **CHAPTER TWO – Project Theoretical and Evidence Base**

### **Nature of the Problem for Seniors**

#### *The Aging Baby Boomers*

“Baby Boomers” are those individuals born during a sustained period of increased births post-World War II, from mid-1946 to mid-1964, resulting in a relatively significant large cohort (Ortman, Velkoff, & Hogan, 2014). Due to volume alone, this group of baby boomers will significantly impact the nation’s healthcare system as they age with time.

In 2011, the first baby boomers turned 65 years old and in 2029, the last baby boomers will be turning 65 years old. According to the White House Conference on Aging, there are/will be 10,000 baby boomers turning 65 years old every day (2015). The 2016 Population Reference Bureau reports that the “number of Americans ages 65 and older is projected to more than double from 46 million today to over 98 million by 2060,” this would then represent 24% of the population, an increase from 15% (Mather, 2016). Similarly, the number of Americans in the oldest age bracket, “85 years and older, is expected to nearly double from 8.9 million in 2012 to 18 million by 2050,” representing four and a half percent of the population (Ortman, Velkoff, & Hogan, 2014).

All race and ethnic group representations are projected to increase in those aged 65+ and 85+, though not as diverse as the younger generations. Percentages of growth vary by individual ethnic group with the greatest growth projected among Asians and Native Pacific Islanders (Ortman, Velkoff, & Hogan, 2014). The White House Conference on Aging (2015) reports the fastest growing demographic are women in the

85+ age bracket.

All reports clearly depict a demographic volume which demand the attention, research and integrated care from all health professionals and care providers, as these baby boomers age.

### *Aging in Place*

In AARP's "Home and Community Preferences of the 45+ Population 2014," there is consensus (78%) to continue to live in one's own home or to age in place (Barrett, 2014). Of the 1,014 survey responders, 47% were baby boomers, whose responses were higher: 83% of those between 60–64 and 88% of those aged 65+ reported a preference to "stay in their current residences for as long as possible" (Barrett, 2014, p. 4). More specifically, this desire to age in place was strongly related to the baby boomers' levels of satisfaction with their housing unit and community, as reported by 406 survey responders to a different questionnaire by Kwon, Ahn, Lee, & Kim in 2015. Both studies were analyses of questionnaires in qualitative studies.

OTs are distinctly qualified to address both the physical and socio-emotional well-being of seniors aging in place. Enabling older adults to physically remain in their own homes can also be disabling, if social participation/occupation is not also addressed. Blanchard (2013) states that (physical) aging in place "makes meaningful connection with others difficult, if not impossible." Blanchard is a theoretical advocate of the "Village" Model, where individual senior residents of a neighborhood choose to pay annual dues to "govern" themselves collectively, with designated outside services for members, (housekeeping, handyman, transportation, etc.) usually for reduced group rates

(Blanchard, 2013). Social activities, classes and group events are planned. In a one-year study of a “Village” model in California, 222 members reported a decreased in home modification needs as well as an increase in confidence in aging in place (Graham, Scharlach & Kurtovich, 2016). While their perception of social connectedness improved, the amount of actual social contact and engagement in social and volunteer activities significantly declined; and the number of 911 calls and hospital admissions (healthcare utilization) increased (Graham, Scharlach, & Kurtovich, 2016). The authors explain that natural aging will result in health declines and that the Village model is more social-related than health-related. However, it is worthy to note that the available social and volunteer opportunities of the Village require mobility from the home to events, denying those homebound the same opportunities.

Comparably, Bacsu et al. (2014) conducted semi-structured interviews with 40 rural Canadian residents on their perceptions of *healthy* aging in place; one of five central themes reported by responders, was the importance/need for social interaction. It is evident that seniors aging in place are at risk for social isolation affecting health and well-being. OTs can be sure to address both psychosocial and physical needs of aging in place seniors.

### *Normal Aging, Co-morbidities*

The use of the phrase *aging in place* denotes “in place” as home residences. This section discusses the “aging” component of the phrase; what is aging and what are the normal changes that occur with time? Normal aging affects multiple body components and systems, devoid of any influence of disorders or disease, which is an important

distinction to make (Boss & Steegmiller, 1981; Small, Jarvik & Liston, 1981). With age, the decrease in the elastin proteins of connective tissues results in stiffness of connective tissues of several structures; these include the large arteries, resulting in higher diastolic blood pressure and atherosclerosis; the left ventricle, resulting in decreased cardiac output during exercise; and the lungs, resulting in reduced lung vital capacity (Dolinar, 2008). Age also affects the urinary system: the size of the kidney, the ability to filter the plasma, and the responses to stress (conserve with fluid loss such as bleeding, excrete with fluid overload such as edema) all decrease (Lindeman, 2006). Bladder capacity and flow rate decrease, and post void volume increases (Siroky, 2004).

Other age-related changes include decreases in esophageal motility, bone mass, epidermis/dermis, skin tone, lean body mass and muscle cell structure (Boss & Seegmiller, 1981). Loss of brain volume gradually occurs through the decades, with a decrease in both white and gray matter of the frontal, temporal and parietal lobes (Dolinar, 2008). This results in some loss of reaction time, processing skills, problem-solving abilities and forgetfulness, but all are mild and benign cognitive changes related to normal aging (Warsi, Lyubkin, & Kales, 2008).

Loss, atrophy and/or degeneration of tympanic muscles, hair cells, neurons, vibratory structures, blood vessels and fluids all contribute to presbycusis or age-related hearing loss; these changes affect higher frequencies first and spread to lower frequencies with time (Massoud, 2006). Visually, the lens loses elasticity and thickens increasing occurrence of cataracts and decreased ability for near vision, called presbyopia; the decreases in pupil size and the loss of rods reduces visual sensitivity in low light (Kline,

2006). Age-related changes that also occur include macular degeneration (loss of central vision), and glaucoma (increased pressure) which both reduce vision (Kline, 2006).

Aging brings about a plethora of changes, only some of which are mentioned. These changes all predispose seniors for comorbidities and illnesses as their vulnerabilities increase. There is consensus regarding the prevalence of multiple (two or more) chronic conditions in older adults and more specifically, in six out of ten baby boomers by 2030; these include heart disease, cancer, chronic bronchitis/emphysema, stroke, diabetes mellitus, and Alzheimer's disease (American Hospital Association, 2007; Ward, Schiller, & Goodman, 2014). Arthritis will impact one of two, obesity one of three, and diabetes one of four baby boomers (American Hospital Association, 2007).

### *Influence of Socioeconomics*

Also noted with increased time is the increase in the frailty index. Using 88,117 responses from the U.S. Health and Retirement Survey, Yang and Lee (2009) demonstrated that with the increase in frailty, there were notable differences between lower educated, lower income, non-White, females, and their higher socioeconomic, white, male counterparts at any age. Although this study did not include baby boomers, analyzing older generations born before 1942 still provides trending information.

The American Psychological Association also reports disparities in health, citing a higher incidence of obesity, diabetes, and hypertension in older ethnic/racial minorities compared to older Caucasian adults, as well as an earlier onset of chronic conditions (“Older Adults’ Health” n.d.). The Centers for Disease Control and Prevention (“The State of Aging and Health,” 2013) report contributing factors to health disparities as

poverty, separate ethnic communities with different cultural norms, lower education, unemployment, language barriers, and limited available health resources,

Regardless of physical or medical status, the desire for healthy aging and to achieve important levels of functioning in the areas of physical comfort, social integration, contribution, security, autonomy, and enjoyment were assessed in a study in New Zealand; support with respect to transportation and financial means were critical (Stephens, Breheny, & Mansvelt, 2015). Healthy aging of seniors is a universal desire, and socioeconomic factors do play a role.

### *Homeboundedness*

Normal aging body structures contribute to the physical and psychological reasons for increased homeboundedness. Decreased muscle and bone mass, response time, cardiac and pulmonary status all affect balance, safety and overall functional mobility and endurance which limit egress from the home. However, reduced continence, esophageal mobility, vision and hearing may also contribute to homeboundedness, as the choice to remain home may prevail over participating in community social events, where an embarrassing or frustrating episode may occur. The anxiety whether the occurrence might happen can further limit egress from the home. The increase in comorbidities and frailty only compounds the insult to functional abilities, especially home egress. With the desire of most seniors to age-in-place, the progressive evolution of homeboundedness becomes a reality.

A national study of 7,603 non-nursing home Medicare beneficiaries were each interviewed for two hours about their activities of daily living, health, physical capacity

(Ornstein et al., 2015). The categorization of responses was based on how often and with how much difficulty egress from the home occurred. 5.6% never or rarely left home (homebound), 3.3% never egress alone, twice a week, and 11.7% have difficulty or require help, twice a week (semi-homebound) (Ornstein et al., 2015). In summary, about 20% of Medicare beneficiaries experience a degree of homeboundness, the criteria which meets the requirements for covered home health medical services, not direct or primary psychosocial services (U.S. Centers for Medicare & Medicaid, n.d.).

### *Social Isolation in Seniors*

With aging, health and functional losses are internal. Yet, external losses such as the shared world of spouse, relatives, and friends (Smith, 2012) set the precedence for further homeboundness. The difficulties in maintaining social contacts and participating in valued community activities are realistic risks for social isolation of older adults aging in place. Other risk factors include living alone, rural residences, lower education, and minority status (Dong, Chang, Wong, & Simon, 2012; Nicholson, 2012; Smith, 2012).

The initial literature search for social isolation in seniors also produced studies which included the term “loneliness.” Descriptions of social isolation and loneliness were inconsistent, varied, and included: subjective feelings, number of social contacts, meaningful relationships and expectation, emotional versus social isolation, positive versus negative interactions, etc. (Theeke, 2009; Dong, Chang, Wong, & Simon, 2012; Smith, 2012).

Nicholson’s definition of social isolation is based on “concepts, attributes,



antecedents and consequences” (2009, p. 1343). According to Nicolson, one is socially isolated who “lacks a sense of belonging socially, lacks engagement with others, has a minimal number of social contacts and is deficient in fulfilling and quality relationships” (2009, p. 1344), and for whom, *loneliness* can be a consequence. Gerst-Emerson and Jayawardhana defined loneliness as the difference between desired and perceived social relationships and measured loneliness by asking respondents how often they felt that they lacked companionship, felt left out, or felt *isolated* from others (Gerst-Emerson & Jayawardhana, 2015).

In a review of the expansive literature, it appears that social isolation may be considered a condition, while loneliness a subjective feeling. At times, they are studied distinctly. One can be lonely without being socially isolated and vice-versa. For example, of 7,060 respondents to a longitudinal nationwide Health and Retirement Study, 53-56% were lonely some of the time, 35-37% were lonely most of the time, and chronic loneliness was positively associated with physician visits (Gerst-Emerson, K., & Jayawardhana, J., 2015). Additionally, a longitudinal study of 6,500 English men and women demonstrated that social isolation was associated with higher mortality (Stephoe, Shankar, Demakakos, & Wardle, 2013). A landmark study of 16,849 US adults also revealed social isolation as a predictor for mortality, statistically comparable to other well-known clinical risk factors such as smoking, obesity, hypertension and hypercholesterolemia (Pantell et al., 2013). Studies which link or associate social isolation or loneliness with critical illness, cardiovascular health, cognitive decline, depression, and functional disabilities are more consistent than studies which attempt to

demonstrate a causal directionality (Courtin & Knapp, 2015; Pantell et al., 2013; Steptoe, Shankar, Demakakos, & Wardle, 2013; O’Luanaigh, 2012; Smith, 2012).

Findings from a survey of 1,627 seniors nationwide revealed that while 31% of those aged 65+ do not feel socially engaged, the majority recognize the importance of staying socially connected (Humana, 2018). More specifically, 85% report the importance of friendship, 61% report the importance of companionship and 22% report the importance of romantic partners (Humana, 2018). Self-awareness of an of an issue such as limited social engagement, and knowing its importance help to provide motivation for changed behavior. This is an important premise for participation in SBFSSS.

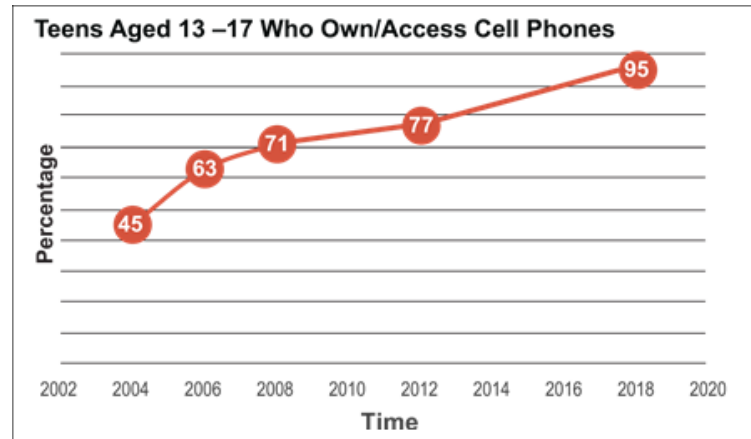
In summary, often, the terms social isolation and loneliness are linked together without delineation, in research introductions/discussions and in measurement tools/interview questions, including their definitions as described above. Nevertheless, for seniors, the underassessment of both/either social isolation and/or loneliness and links to negative health outcomes are evidenced in studies, clearly demonstrating common and related concerns which are addressed in SBFSSS. Going forward, this paper will utilize the term social isolation, acknowledging the emotional loneliness that may occur, with respect to homebound seniors.

## **Nature of the Problem for Teens**

### *Digital Media*

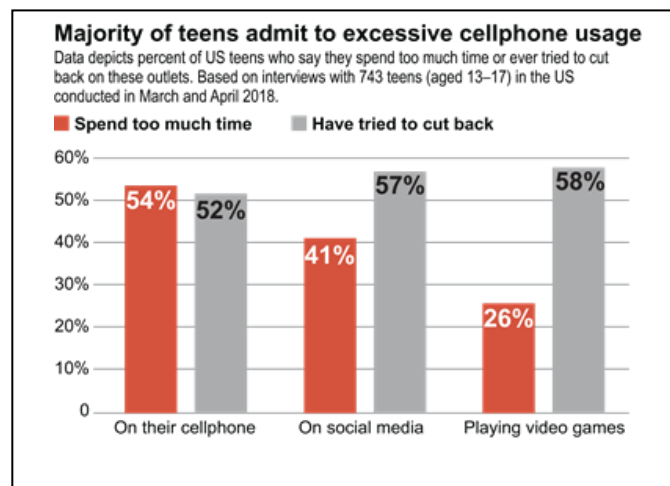
The ubiquitous presence of digital media in today's culture cannot be denied. Specifically, teen use of cell phones is commonplace and has shown tremendous growth in the past few years. A search for statistics on this issue leads to several notable groups: 1) Common Sense Media, a nonprofit, independent source of researched-back information on media, technology and youth (Common Sense Media, n.d.), 2) Pew Research Center, a nonprofit, nonpartisan, data and fact-driven research "tank" (Pew Research Center, n.d.) and 3) Monitoring the Future (MtF), an ongoing study of American secondary school and college students, and young adults, surveying 12 graders annually since 1991 and 8<sup>th</sup> and 10<sup>th</sup> graders since 1975 (Monitoring the Future, March 2019). All sources utilize large nationally represented sample sizes and surveys ranging from 700 (annually) to 1.1 million (through 30+ years).

Based on reports from the Pew Center, the following graph depicts the significant rise in the teen ownership of (access to) cell phones in a 14-year span: 45% in 2004 more than doubles to 95% in 2018, crossing all socioeconomic boundaries (Anderson & Jiang, 2018). It is one of the few areas which does not show any disparities across gender, race, or parental income and level of education. Figure 2.1 shows the increasing trend of cell phone acquisition by teens in the past 14 years using data compiled from Pew Research Reports (Anderson & Jiang, Pew Research Center, 2018; Lenhart, Pew Research Center, 2015, April 9).



*Figure 2.1: Teen acquisition of cell phones*  
*Data from Pew Research Center, 2015, 2018*

The 2018 study of 743 teens, also reveals that 45% report being “on line constantly.” Other data from Pew Research studies include the following graph, Figure 2.2, showing teens’ reports about the amount of time they spend on the various digital media, including efforts to curb these habits (Jiang, 2018).



*Figure 2.2: Teens reveal cellphone, social media, and video game use, and attempts to curb.*  
*From Jiang, 2018*

Acknowledgement of excess use and attempts to change are important drivers in the SBFSSS program.

Common Sense Media, in a 2015 nationwide survey of 1,141 teens aged 13–18, reported that “on any given day, these teens average about nine hours (8:56) of entertainment media use, excluding time spent at school or for homework...this includes watching TV, movies, and online videos; playing video, computer, and mobile games; using social media; using the Internet; reading; and listening to music” (Common Sense Media, 2015, p. 13). This time includes multitasking or using two media simultaneously (one hour watching videos while listening to one hour of music was calculated as 2 hours) or listening to music while doing chores. An update by the same group, Common Sense Media (2018), reports that 70% of teens check social media multiple times a day (an increase from 34% in 2012), primarily using Instagram and Snapchat, and preferring texting over talking.

MtF survey data from 1976–2016 encompassing an n=1.1 million were analyzed by Twenge, Martin and Campbell (2018) with the following results: 1) after 2012, there is an acute decline in the psychological well-being (self-esteem, life satisfaction, and happiness) of teens, 2) more screen time (digital media) combined with less non-screen time (ie, sports, religion, face to face social activities), resulted in lower psychological well-being and vice-versa; and 3) the happiest is the combination of low screen time and high non-screen time activities. Additional data from YRBSS (Youth Risk Behavior Surveillance System) yielded correlations between increased screen time and increased depression, suicide related outcomes and deaths, primarily of female teens in the 2010s

(Twenge, Joiner, Rogers & Martin, 2017). Jiang (2018) validates that 49% of female teens experience loneliness and anxiety without their phones.

However, Common Sense Media does produce conflicting results about the negative psychosocial effects of increased screen time, reporting that 1) teens find more positive than negative feelings re: cell phone use and 2) the already vulnerable teen with low esteem will exhibit more extreme psychological effects of increased screen time (2018).

The number of views and studies touting the benefits or the detriments of cell phone use are exhaustive but they are seldom exclusive, acknowledging the opposing view in some manner. The studies discussed in this section have large subject numbers, for which survey questions rely on teen recall at times. The advent of new phone features and apps to track screen time will certainly provide more accurate objective information than self-report or recollection. The bottom line consensus however, is the objective increase in screen time use and increased cell phone ownership by teens.

### *Use of Time and Occupations*

Because teens are indeed spending more time on digital media, some researchers analyzed the effect this has on spending time with other occupations. Increased use of social media and cell phones at night resulted in sleep deprivation in teens during the week, which negatively affected mood and daily functioning (Royant-Parola, Londe, Trehout, & Hartley, 2018; Twenge, Krizan, & Hisler, 2017). MtF and YRBSS studies have identified other nonscreen occupations which have shown a decrease with increased screen time since 2010; these include “in-person social interaction, print media,

sports/exercise, and attending religious services” (Twenge, Joiner, Rogers & Martin, 2017, p. 13). Data from the Panel Study of Income Dynamics (PSID)—Child Development Supplement (CDS) was analyzed by Lee in 2009. Of 1,312 teenagers, increased online time resulted in decreased time spent with parents. This finding did not include other family members, other adults or seniors. Further searches on the effect of increased screen time on these types of interactions yielded no results. However, in Lee’s analysis, time spent with friends was unaffected, as the online communication was with friends, increasing more cohesiveness. Other studies validate this “rich get richer” (Lee, 2009, p. 525) theme where online connections solidify, maintain and strengthen current social groups and friendships (Common Sense Media, 2018; Lenhart, 2015).

#### *Age-Segregated Communication*

Teens have immediate and constant access to their own cohort, preferring to text and use social media over in person experiences (Common Sense, 2018). This can be either synchronous or asynchronous which increases opportunity for communication of information. While some view this group cohesiveness as a positive effect (Common Sense Media, 2018; Lenhart, 2015), Strom and Strom (2015, p. 42) name this phenomenon, “age-segregated communication practices” of adolescents and teens. The feedback, guidance, and problem solving from their (adolescent/teen) own cohort, represent a narrowed viewpoint, and limit that which comes from adults and seniors, more common sources in previous generations (Strom & Strom, 2015). The authors refer to Fischer’s 2013 study in which employers identified some of the reasons for not hiring new college graduates as the decreased ability to communicate with others and lack of

teamwork problem solving; important factors they consider are the face to face interview and a non-on-line college education. Ability to communicate with others and in person is valued by employers. For teens, the rise in cellphone ownership, rise in digital media use, and rise of “age-segregated communication practices,” may limit the benefits of intergenerational communication and interactions with adults and older adults.

### **Addressing Two Issues in One Program**

The current trends of increased numbers of seniors aging in place and of increased teen ownership of cell phones and screen time result in greater risks of social isolation and age-segregated communication, negatively affecting the health and well-being of these two generations. To address these issues of isolation and segregation, SBFSSS is a unique program involving homebound seniors and high school students in mutually respectful, learning about each other, intergenerational visits based on common valued occupations. School buses are the means to transport students to the homebound seniors. Administered by an occupational therapist, SBFSSS seeks to demonstrate benefits to both high school students and seniors, affecting the health and well-being of the multigenerational community.

In an extensive search of the literature, this type of health and wellness program has not yet been implemented or studied, for comparison. Nonetheless, the following synthesis represents the different components or aspects of the proposed SBFSSS program, which have been addressed.

### *Types of Intergenerational Programs*

Herrmann, Sipsas-Herrmann, Stafford & Herrmann (2005) describe three



types of intergenerational programs which have been implemented with research data: 1) youth and senior adult as equal partners participating in shared activities, 2) youth assisting or mentoring the senior, and 3) the senior mentoring or assisting the youth. This literature search focused on programs with seniors who were cognitively intact and lived in their own residences, two factors which are inclusion criteria for SBFSSS. Often the contexts for these interventional intergenerational programs were in the community to which the senior needed to travel: at a senior center or local activity (Chippendale & Boltz, 2014; Teater, 2016) or schools (Cohen-Mansfield & Jensen, 2016; Gruenewald et al., 2016; Herrmann, Sipsas-Herrmann, Stafford, & Herrmann, 2005; Murayama et al., 2014; Souza & Grundy, 2007; Thompson & Weaver, 2016). Only 3 studies were located, which involved social visits to the homes of seniors, by postsecondary, preprofessional students (Bullock & Osborne, 1999; Kunstler, 2002; Nicholson & Shellman, 2013). The literature search does include studies with youth of various ages from kindergarten to college/graduate school. No studies were found which utilized school buses to transport high school students for one to one social visits to the homes of seniors.

#### *Home Visits of a Social Nature for Seniors*

While home health care is a well-established means of servicing those who are homebound, the main criteria for reimbursement by insurance, visits are primarily medical (U.S. Centers for Medicare & Medicaid, n.d.). Three studies regarding the existence of home visits of a social (non-medical) nature for isolated seniors, were found in the literature. Weekly visits from therapeutic recreation students for ten weeks in an urban setting (Kunstler, 2002), and senior volunteers for eight weeks in a rural setting

(MacLeod, Skinner, Wilkinson, & Reid, 2016) were reported to be beneficial to the well-being of homebound seniors. The third study combined social visits with assistance in IADLs and home management (Bullock & Osborne, 1999). Though positive effects were attained for both generations, limitations of these studies included small sample sizes (10, 12, and 20), no formal assessments of well-being and lack of program sustainability. Overall conclusions were similar: more research and appropriate measuring tools are needed, as well as ongoing support (funding, personnel, supplies, etc.) for continuing such beneficial programs (Kunstler, 2002; MacLeod et al., 2016).

#### *Evidence of the Interventions in Intergenerational Programs*

A common intergenerational intervention found in the literature, was seniors assisting youth academically, behaviorally, or pre-vocationally in school settings (Cohen-Mansfield & Jensen, 2016; Gruenewald et al., 2016; Herrmann, Sipsas-Herrmann, Stafford, & Herrmann, 2005; Murayama et al., 2014). Another prevalent intergenerational intervention was seniors' reminiscing, story-telling or life reflecting to students, with facilitation by trained teachers or program administrators (Chippendale & Boltz, 2015; Cohen-Mansfield & Jensen, 2016; Nicholson & Shellman, 2013; Souza, 2003; Souza & Grundy, 2007; Thompson & Weaver, 2015). Structured shared activities such as arts and crafts, playing cards, gardening, topic discussions, meals or other tasks of companionship were other types of intergenerational interventions (Kunstler, 2015; Nicholson & Shellman, 2013; Teater, 2016). The nursing students in Nicholson and Shellman's CARELINK program (2013) uniquely incorporated empowerment of seniors by providing education in strategies to reduce or prevent social isolation.

### *Intergenerational Program Benefits for Seniors*

Positive qualitative outcomes for senior participants in intergenerational programs have been demonstrated in many studies: reduced feelings of social isolation and loneliness (Bullock & Osbourne, 1999; Nicholson & Shellman, 2013), improved sense of and achievement in generativity (the passing wisdom to the next generation), sense of purpose and meaning in life (Chippendale & Boltz, 2015; Gruenewald et al., 2016; Herrmann et al., 2005), and an improved sense of “coherency” or the ability to control stress, better health and well-being (Bullock & Osbourne, 1999; Murayama, 2014; Souza, 2003; Souza & Grundy, 2006; Teater, 2016). Other mental health benefits included improved mood and attitude, and improved understanding of the younger generation (Bullock & Osbourne, 1999; Cohen-Mansfield & Jensen, 2016; Souza, 2003; Souza & Grundy, 2006).

### *Intergenerational Program Benefits for Youth*

A typical benefit of intergenerational programs for youth is the improved perception and knowledge about aging (ageism), a decrease in stereotypes and a gain in respect and empathy (Bullock & Osborne, 1999; Thompson & Weaver, 2015; Souza, 2003). Two randomized controlled intergenerational studies, one in the U.S. (Rebok, 2004) with 1,194 students, and one in Brazil (Souza & Grundy, 2007) demonstrated improvements in academic scores, behavior issues and better health, respectively, when compared to control groups. One notable study of a longstanding intergenerational program called “Bridges Growing Together” in Sudbury, Massachusetts, examined youth outcomes in years post-intergenerational program intervention (Thompson & Weaver,

2015). Students who experienced the curriculum-based 4th grade program with seniors had a positive image of seniors 5–9 years later, compared to students who did not experience this interaction at a different elementary school. However, despite maintaining this positive view of seniors, the students had a negative view of the process of aging or growing older. This study demonstrates the many facets of seniors and the aging process, and how attitudes and perceptions can be mixed (Thompson & Weaver, 2015). Also, with respect to long term effects, Yasanunga et al. (2016) are studying if engagement in the REPRINTS (Research on Productivity Through Intergenerational Sympathy) at an early age results in students who will engage in community service, as young adults; the results are highly anticipated.

#### *Intergenerational Program Benefits for the “Middle”*

Though not initially part of the literature search, the benefits to the adult children of seniors were discussed in one study by Bullock and Osbourne (1999). Representative of the sandwich generation, these adults who work and care for their own children, also have geographic distance to their parent(s). They were solicited for their feelings about their parents being part of the Befrienders intergenerational program. The young adults providing social stimulation and IADL assistance during home visits in a rural area, indirectly provided peace of mind, comfort and satisfaction for this middle generation. Thus, an intergenerational program can benefit the entire multigenerational community.

#### *Intergenerational Program Components Contributing to Positive Outcomes*

The choice of activity and what is meaningful to the volunteer seniors were important factors in their full engagement, continued volunteerism, and positive

outcomes in mentoring relationships with youth (Cohen-Mansfield & Jensen, 2016; Herrmann, Sipsas-Herrmann, Stafford, & Herrmann in 2005). Valued participation in meaningful activities resonates with occupational therapy. Guidance and training of volunteers were other factors in these two studies. Trained volunteers showed a greater sense of generativity (sense of helping the next generation) than untrained volunteers (Herrmann, Sipsas-Herrmann, Stafford, & Herrmann, 2005); thus, a pre-program training period is another component of a successful intergenerational program. Another contributing factor affecting positive outcomes of intergenerational program was ratio of students to seniors in a senior mentoring scenario (Souza, 2003; Souza & Grundy, 2007). Additionally, one-to-one programs in a partnership relationship with “older youth/students” (college age) resulted in less negative comments from senior volunteers (Bullock & Osborne, 1999; Kunstler, 2002; Nicholson & Shellman, 2013).

#### *Critique of Intergenerational Programs in the Literature Search*

Among the numerous, primarily qualitative studies on intergenerational intervention programs, there were a myriad of assessment tools including interviews, from which themes were extracted, making comparisons difficult: for example, social isolation was measured with different assessments in different studies (Chippendale & Boltz, 2015; Gruenewald et al., 2016; Herrmann, Sipsas-Herrmann, Stafford, & Herrmann, 2005; Nicholson & Shellman, 2013).

Few studies were random controlled trials (RCTs) although there is the ethical dilemma of not providing a benefit to a control group. The notable RCT study of the intergenerational program, Baltimore Experience Corps® generated several studies on

benefits to seniors and to students, in which control groups were adults volunteering in settings without youth (Gruenewald et al., 2016; Murayama et al., 2014; Rebok, 2004; Yasunaga et al., 2016). Other studies placed volunteers on a “wait list” for the intergenerational intervention as a control (Nicholson & Shellman, 2013).

Communication, perhaps inappropriately, of the difference of conditions between two groups, by researchers attempting to design control groups, may have negatively affected outcomes as there was volunteer disappointment with given assignments, and lack of choice, at times leading to drop-outs (Chippendale & Boltz, 2015; Herrmann, Sipsas-Herrmann, Stafford, & Herrmann, 2005).

Factors which could have influenced outcomes included the method of obtaining participants. The recruitment of senior or student volunteers inherently implied intrinsic motivation to participate, which may positively affect outcomes. Conversely, seniors who were referred to a program or students in classes where intergenerational programming was part of a curriculum, did not have a choice, which may negatively affect outcomes.

Because the youth in the studies of the literature search varied in ages/grades, psychosocial development and growth could have played a factor in the outcomes, as well as in the connectedness with the seniors and vice-versa. Yet, Erikson’s Theory of Psychosocial Development was often referenced in intergenerational studies with respect only to the senior participants’ stage of development of generativity, without regard to the youths’ stage of development (Chippendale & Boltz, 2015; Cohen-Mansfield & Jensen, 2016; Herrmann, Sipsas-Herrmann, Stafford, & Herrmann, 2005; Murayama et al., 2015;

Teater, 2016).

Studies outside the US, namely in Brazil, Japan and Israel (Cohen-Mansfield & Jensen, 2016; Murayama et al., 2015; Souza, 2003; Souza & Grundy, 2007; Yasunaga et al., 2016,) provided supportive outcome information, though may have limited generalizability to this program (in Pennsylvania) due to cultural generational differences.

The best criticisms of intergenerational programs came from the participants who were often interviewed as a type of formative evaluation; this feedback helped to make appropriate process improvements for better future outcomes and future studies such as SBFSSS.

### **Creating SBFSSS Based on Evidence**

The benefits of intergenerational programs for both groups of participants, youth and seniors, have been consistently demonstrated primarily in qualitative studies from various countries and cultures. Based on the literature search described above, several components were noted to foster more positive outcomes including participants' choice of valued activity in the program, training and guidance of participants prior to and during program implementation, and numerical ratio of youth to seniors. Secondary benefits may also be realized for the sandwich generation in between the youth and seniors, a positive peace of mind. This information helped in the design of the proposed program School Buses for Students Supporting Seniors (SBFSSS) as a positive intergenerational intervention. No other studies have been located, in which high school students have been transported to the homes of homebound seniors for one to one, social

visits based on common valued occupations. This is what makes SBFSSS unique. The projected positive outcomes of SBFSSS will help contribute to social capital, where the trust and cooperation between and among generations extend to the common good of the community.

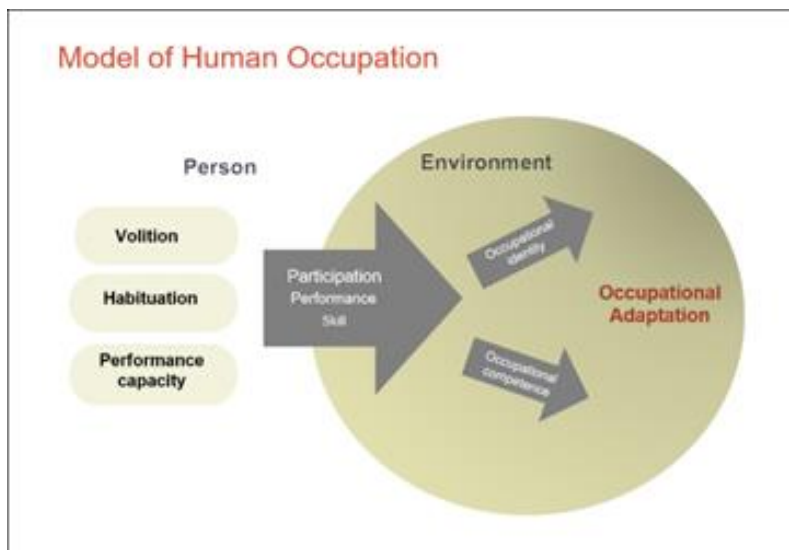
### **Theoretical Foundations**

#### *Model of Human Occupation (MOHO)*

Common occupations between senior and student distinctly forms the foundation of the SBFSSS program. Occupational therapy facilitates engagement in occupations or those meaningful “everyday life activities ... (to)...support participation, performance, and function in roles and situations in home, school, workplace, community, and other settings” (AOTA, 2011). SBFSSS, as an OT administered program, is created with a theoretical foundation using the Model of Human Occupation (MOHO).

As a widely applied theory in occupational therapy, MOHO describes occupation as that which is accomplished through interaction of motivation/volition, patterns of behavior, skilled performance and environment (Forsyth & Kielhofner, 2003). In assessing clients, the MOHO based OT will concentrate on the clients’ belief in self and motivation for occupation; OT interventions will include those occupations in which the client can achieve competence and identity culminating in occupational adaptability, or the ability to adapt to the dynamic environment for optimal health and well-being (Forsyth & Kielhofner, 2003; Wong & Fisher, 2015). Figure 2.3 is a schema of MOHO based on original depictions of the model (Wong & Fischer, 2015, p. 303).





*Figure 2.3: Schema of Model of Human Occupation; adapted from original depictions of the model (Wong & Fischer, 2015)*

Seniors who are aging in place, homebound and socially isolated and teens who have excess screen time and less in-person and non-screen activities both represent groups of individuals with an imbalance of occupations which may have negative effects on health and well-being. However, seniors who would like to improve social connectedness and teens who desire to reduce digital media time demonstrate volition or motivation for change, an important component of MOHO theory.

For both generations, SBFSSS as a program intervention facilitates a change of habits and routines, a regaining of face-to-face communication in a social setting, an acquisition of intergenerational interaction skills. SBFSSS common occupations represent values of engaging in occupations which are meaningful from past, neglected, or even new occupations. SBFSSS seeks to restore occupational balance, enhance occupational identity and occupational competence. The ultimate goal for both

generations is occupational adaptability in their different environments. For seniors, the dynamic environment is physical (home), social (isolating), and temporal (aging). For teens, the dynamic environment is virtual (digital media), temporal (time use) and social (cohesive or segregating). Occupational adaptability supports health and well-being.

### *Erikson's Stages of Development*

A program designed to bring together two different generations would be remiss if a theory on psychosocial development were not included. Erik Erikson's Theory of Psychosocial Development is more descriptive than operational. He describes each sequential stage of development as a conflict, crisis, or period of exploration and heightened potential, that results in a positive psychological strength called a virtue, a state of well-being (David, 2006; Haber, 2016; Sokol, 2009). Although there are 9 Eriksonian stages of development, the scope of SBFSSS involves two or three appropriate stages. For teens 13-18, the stage of development or conflict is described as Identity Versus Identity Confusion, when the adolescent determines own sense of self and the resulting virtue is fidelity, true to oneself (Papilia & Olds, 1992). Social cohesion and social media use are increasing for teens. Self-identity is critical, and discovering different roles and how time is utilized and valued are important components in SBFSSS for teens.

For adults 35-65, the stage of development or conflict is Generativity Versus Stagnation, when the adult guides the next generation or feels personal impoverishment and the resulting virtue is caring (Papilia & Olds, 1992). Sense of generativity has been a positive outcome for seniors when mentoring youth in past studies (Gruenewald et al.,

2016; Herrmann, Sipsas-Herrmann, Stafford & Herrmann, 2005; Murayama et al., 2014) and will be a type of intergenerational visit in SBFSSS. The next stage of development or conflict is Integrity Versus Despair (older adult, 65+), when the older adult is accepting of his/her own life, accepting of death or falling into despair and the resulting virtue is wisdom (Papilia & Olds, 1992). SBFSSS will facilitate seniors' acceptances of physical limitations while continuing to meet psychosocial needs. Adaptations to social activities will be assessed and implemented by the OT administrator. These two psychosocial stages of adulthood are described since age 65 overlaps both, and the starting age of seniors in SBFSSS is 65 as well,

In accordance with Erikson's stages of development, one of the assessments administered pre- and post-SBFSSS program is Erikson based: the MEPSI or Modified Erikson Psychosocial Stages Inventory, or when administered to clients is known as the "Personal Attitudes Survey" (Darling-Fisher & Kline-Leidy, n.d.). While its overall reliability has been proven, subsets are still being researched (Darling-Fisher, 2018); SBFSSS will provide findings based on the subsets of Identity Versus Role Confusion for teens and the subsets of Generativity Versus Stagnation or Integrity Versus Despair based on the age of the senior. SBFSSS will utilize this measure as a type of self-efficacy and self-belief tool for both generations.

In congruous with MOHO and the concept of self (occupational) identity, Erikson states, "Identity formation neither begins nor ends with adolescence: it is a lifelong development largely unconscious to the individual and to his society" (Erikson, 1980, p. 122). For SBFSSS, both generations, regardless of age, will continue their journeys

toward self (occupational) identity and psychosocial well-being.

### **Putting It All Together**

The evidence has been presented, the facts are clear. The senior population is rapidly increasing and aging naturally, and with comorbidities. They certainly want to remain and physically age in their own homes. With time and losses of abilities, family and friends, the risk of social isolation increases, which negatively affects health and well-being. Concurrently, the rise of cell phone use and screen time have rapidly increased for teens, as their cohort cohesion tightens and expands. There are pros and cons of this peer group. Displacement of other occupations and social communication with non-peers is a great concern. Psychosocial well-being of some teens is at risk, and there are potential effects years later in potential job situations.

SBFSSS as an intergenerational intervention, seeks to address problems plaguing both generations. The positive effects of intergenerational programs are evidenced based for both parties. Still, SBFSSS takes it to another level, uniquely incorporating common occupations as the basis for the intergenerational interaction, focusing on what is meaningful and valued, offering client-centered choices whenever possible.

## **CHAPTER THREE – Description of the Program**

### **Program Description and Context**

School Buses for Students Supporting Seniors (SBFSSS) is an intergenerational program in which school buses transport students from their high school to homes of isolated, homebound seniors, for mutually beneficial, learning about each other visits, based on common valued occupations. A trial of SBFSSS will occur along two bus routes of a medium sized school district, in the suburbs of Philadelphia. Intergenerational visits will occur in the context of the residences of aging in place seniors; the program trial of 12 weekly visits will begin in the fall 2020. With formative program evaluations, adaptations can be made to the processes and operations of SBFSSS to facilitate positive outcomes. The overall goals of the successful trial program are expansion and sustainability of SBFSSS to the entire school district. The projected outcomes of a district-wide SBFSSS are improved knowledge and respect of other generations, reduced social isolation of seniors, increased non-peer communication of students, improved self-efficacy, and improved health and psychosocial well-being of all participants.

#### *Intended Participants: Inclusion and Exclusion Criteria*

Seniors who are residents of the school district, who are homebound or who have difficulty with home egress, and who are aging in place, comprise one of the two groups of intended participants in SBFSSS. Senior participants will be recruited (self, senior service agency, family member, or physician referred) in Summer 2020 and will continue, until a minimum of 6 per bus route is obtained; inclusion criteria includes aged 65+, homebound status, safe home features (checklist completed by program

administrator or reliable referral), medical clearance to participate, Mini Mental Status Exam score of 24+, signed commitment and consent to have weekly visits from students.

The second group of intended participants in the SBFSSS program are high school students from grades 11 and 12. Opportunities to participate will be communicated through various forms of media including the school's weekly announcement of community service opportunities, which help students fulfill the required hours for graduation. Recruitment of student participants will begin in Spring 2020 until a minimum of 20 is obtained: inclusion criteria includes willingness to visit seniors in their own residences, parental permission, and signed commitment and consent. Referral and permission from the teacher of the class that corresponds to the themed intergenerational visit are mandatory for participation. For example, Mr. Snyder, the art teacher, needs to grant permission to Nicole for a painting visit with Mrs. Jackson in lieu of attending art class. Nicole, a strong student, agrees to make up missed work. A flexible and enabling student schedule, where a study hall or lunch period juxtaposed to the targeted class, helps facilitate participation in SBFSSS.

#### *Program Features, Design and Delivery*

The basis of all student-senior SBFSSS intergenerational visits is common occupations. A literature search of intergenerational programs reveals 3 general themes: didactic teaching/learning (Gruenewald et al., 2016; Herrmann, Sipsas-Herrmann, Stafford, & Herrmann, 2005; Nicholson & Shellman, 2013), preplanned activities such as book, life or story-telling (Chippendale & Boltz, 2015; Murayama, et al., 2014; Thompson & Weaver, 2016) and service (Andreoletti & Howard, 2018). None of these

themes revolves around chosen common occupations, but rather structured activities, pre-planned by program administrators. One study noted decreased satisfaction of seniors who were assigned to one of the two youth groups with different themes; the ability to choose, even between 2 imposed options, impacted results, despite overall positive effects. (Herrmann, Sipsas-Herrmann, Stafford & Herrmann, N. C., 2005). Other important features of intergenerational programs which were revealed in the literature search of chapter two are listed on the left column of Table 3.1, The Conceptual Creation of SBFSSS. These components were noted to be critical in impacting outcomes; corresponding studies are listed with components as representative examples but are not all inclusive. The right column indicates how SBFSSS incorporates evidenced program components, including other aspects to address “missing links,” components for which evidence has not yet available.

Table 3.1 The Conceptual Creation of SBFSSS

<b>Evidenced Program Component</b>	<b>SBFSSS Program Component</b>
Program participants: <ul style="list-style-type: none"> <li>• Seniors, cognition WFL and fit to travel</li> <li>• Youth: mostly elementary or college aged, some teens (Souza, 2003; Souza &amp; Grundy, 2007)</li> </ul>	Program participants <ul style="list-style-type: none"> <li>• Seniors, cognition WFL, homebound</li> <li>• Youth: 11<sup>th</sup>, 12<sup>th</sup> graders</li> </ul>
Intergenerational intervention primarily contexts <ul style="list-style-type: none"> <li>• schools (Thompson &amp; Weaver, 2015)</li> <li>• in the community (Teater, 2016)</li> <li>• senior homes (Bullock &amp; Osborne, 1999)</li> </ul>	<ul style="list-style-type: none"> <li>• In-home context, requiring no travel of seniors</li> <li>• Taking the social community to seniors</li> </ul>
Importance of choice, client preference  (Cohen-Mansfield & Jensen, 2016; Herrmann, Sipsas-Herrmann, Stafford & Herrmann, 2005)	Seniors and students choose their top 3 meaningful occupations and are matched by an OT, according to commonalities
Structured program with pre-established roles of participants; importance of participants' involvement in planning  (Chippendale & Boltz, 2015; Souza & Grundy, 2007; Thompson & Weaver, 2016)	Seniors and students also choose type of visit desired (co-partners, mentor/mentee or mentee/mentor)
Need for training  (Herrmann, Sipsas-Herrmann, Stafford & Herrmann, 2005; Murayama et al. 2014)	All participants and operations staff will have a program orientation or training session prior to the start of visits
Voluntary participation versus required assignment as part of academic course  (Nicholson & Shellman, 2013)	Any volunteer participants (teens and seniors) desiring change or exploration, as per screening



### *From Concept to Operation*

Mandatory training and orientation to SBFSSS is an important feature for all senior and student participants prior to program implementation. Projected start of the trial SBFSSS is fall 2020, consisting of 12 intergenerational visits between 6 pairs of matched seniors and students on each of 2 bus routes (a total of 12 pairs) of a suburban school district, outside of Philadelphia. Orientation to the program for homebound seniors may need to occur at their homes or via telecommunication. These initial interviews with Student and senior participants will insure that the appropriate demographic information and mandatory paperwork are attained. In addition, initial pre-program assessments and surveys will be administered, including the participants' top 3 preferred occupations.

For seniors, perceptions of the younger generation, feelings of social isolation, sense of self-efficacy, and general psychosocial well-being and health are the pre- and post-program measures. For students, sense of ageism and feelings of the older generation, time spent communicating with adults, sense of self-efficacy, and general psychosocial well-being and health are the pre- and post-program measures. The next chapter on Evaluations discusses these specific assessments. Change is measured within individuals by comparing assessment outcomes before and after program implementation.

All student participants will leave from and be returned to the high school via school buses/drivers. Scheduled visit times coincide with the student's corresponding class, with teacher permission. The following are examples of school supported intergenerational visits based on the common occupations: a photography-based visit

may occur during the student's scheduled art class, a visit calling registered voters to vote may occur during a social studies/history class, and a visit playing an instrument may occur during band class. Photography, politics, and playing/enjoying musical instruments would be listed as top occupations for seniors matched respectively to these students. Other alternative times could be after school, or during study halls/free periods, lunch time. An adult volunteer will accompany the bus driver on all routes as an adult contact person for the students. Weekly visits are scheduled and managed for time efficiency. The SBFSSS administrative assistant and the transportation scheduler utilize the appropriate software "VersaTrans" for route planning and scheduling (Bonnie Kinsler, Supervisor of Transportation, Rose Tree Media School District, personal communication, February 9, 2018).

At the conclusion of the program, after the 12th weekly visit, post-program assessments will be administered during an exit interview. Assessments are done on-line to protect anonymity. Volunteers who ride the school buses with the driver will have computer tablets to enable the process to occur in cases where digital media is not available.

At the conclusion of the program, satisfaction surveys (pilot and district-wide) will be administered to all student and senior participants, as well as from other authorizing, funding, referring, and operating stakeholders. More specifics on satisfaction surveys are discussed in the next chapter on Evaluation. Data collection will include the number and duration of visits, bus time schedules and finances. Changes will be integrated as needed especially during the trial program, the development phase of an

efficacious district-wide SBFSSS program.

*Personnel: Roles and Responsibilities*

SBFSSS requires an OT program administrator to oversee the development, the implementation, operation, and growth of the program. She/he will be responsible for written plans, program policies, procedures, and reports, and communication of such with appropriate parties. She/he will create and/or obtain appropriate outcome measures and administer them to participants, recording results on a password protected computer. The OT administrator matches student and senior based on common occupations and may make home visit safety checks if not yet completed by a referring clinician. Ultimately, this program administrator can assist in any non-transportation role. A program or administrative assistant will be responsible for data entry, coordinating referrals, insuring both senior and student participant appropriateness with completion of necessary qualifying paperwork, and scheduling themed visits in coordination with the bus drivers and transportation department. The program assistant will be the master scheduler, coordinating student availability with occupation-matched senior.

As SBFSSS expands to full district-wide implementation, a marketing/fundraising professional will be needed and responsible for persuasive and/or informative communication across all media forms to all potential stakeholders: community referring sources for seniors and students, and funding sources including government agencies, local organizations/businesses, and appropriate grants. An additional Certified Occupational Therapy Assistant (COTA) or Occupational Therapist, Registered (OTR) will be needed as well with the growth of SBFSSS.

Two weeks prior to program implementation, at least two bus drivers, and transportation support personnel (maintenance and scheduler) are needed to provide the means of transporting students safely and efficiently, to and from the homes of seniors. Volunteers will ride the bus routes, provide supervisory visits and supply electronic tablets for completion of assessments (all self-report) as needed; volunteers may be recruited from the school's PTG (parent-teacher group) or the M.A.N.E. (Mature Adults Nurturing Education) club for seniors. All above personnel and volunteers are needed but not necessarily on a full-time basis, with variable starting dates according to their roles in the development and/or implementation of the program. Growth of the SBFSSS program will naturally require more bus driver and volunteer hours.

Teachers will be consulted for appropriate student referral/participation, potential academic themed occupations, scheduling, missed classes, and feedback about the program. School administrators will be consulted for shared transportation/maintenance employees, bus use, student participation, staff roles, and feedback about the program. Time spent by teachers and administrators may be considered community service or may need to be compensated for on a monetary, per hour basis, depending on existing contracts. Growth of the SBFSSS program may require more teacher and administrator hours.

### *School Buses*

The importance of school buses in our society cannot be emphasized enough. On Public Broadcasting Service's (PBS) series entitled "America Revealed," an episode on "Riding the School Bus" revealed the following: "our school buses transport 26 million

people each day ... more than any other form of public transportation ... to every corner of the school district, in rural areas, large and small (PBS, 2012). Surely, school buses/drivers can access even the most remote seniors who are not only geographically isolated but socially isolated as they age in place.

An example school district for a SBFSSS trial with projected full implementation is the Rose Tree Media School District (RTMSD) in Media, Pennsylvania, a suburb of Philadelphia. A suburban school district like RTMSD encompasses about 30 bus routes with only minutes between stops, different from a rural geographic area. For full district implementation, a projection of 8 visits per route can result in the combination of routes for efficiency. Software scheduling will consider 35–45 minute visits at each house stop, with school buses looping back for pick up for returning students to school.

### **Potential Barriers and Challenges**

SBFSSS is a program that must have external authorization from the school board and administration to be implemented. Because it involves students, school buses, and school transportation personnel, SBFSSS must be approved by these governing bodies. To meet this challenge, advocacy for SBFSSS can be made by its alignment with the school district's mission statement. RTMDS heralds “an environment that celebrates students' diversity, individual talents and efforts, and promotes collaboration, caring, respect, and leadership...helping all students reach their intellectual, emotional, social and physical potential” (RTMSD homepage, n.d.). In accordance, the school board is charged with approving the implementation of “cooperative training programs that take pupils into the community during part of their educational career...and to make those

experiences meaningful, the Board feels cooperation with the community is essential” (RTMSD school board policies, n.d., p. 187). SBFSSS is the ideal program for school-community engagement.

Another potential barrier may be cost or budget. Funding can be obtained from numerous sources, but this will require much pre-program preparation and perhaps, the skills of a marketing/fundraising professional (certainly needed with an expanded district-wide program). SBFSSS as a line item on the school budget is ideal, even for partial funding to facilitate sustainability. Again, this requires the approval of school administrators and the school board during budget meetings. Perhaps an important statistic could be calculated, demonstrating that as tax paying residents of the school district, seniors do financially contribute to the school system without receiving much if any benefit; they are often resistant during public budget meetings when increase in school tax is considered. SBFSSS may offer more obvious benefit to the school tax paying seniors. Other sources including grants and government funding can help relieve the school district’s sole responsibility. Local sponsors can also contribute to expenses which are primarily salaries. More specifics can be found in the chapter on funding.

If the trial program is found to be effective, funding will continue to be challenging for sustainability. Therefore, any positive outcomes and satisfaction surveys of the trial program need to be communicated appropriately, and efficiently to all, especially to authorizing and funding stakeholders and to the public community for their support.

Other projected challenges during program implementation may be inconsistent

attendance by students based on instructional and academic demands, and personality issues interfering with the therapeutic process. Having a team of students per one senior may help assuage teacher concerns over frequent missed classes, student concerns over missed work, and senior/student personality issues. Other foreseeable challenges could be medical issues of seniors, and timing and scheduling of buses. A steady pool of participants and waiting list, effective communication, solicitation of feedback, flexibility and alternate plan “B’s” will directly meet these challenges head on.

### **Summary**

A trial run of SBFSSS will help filter out problems and address issues prior to the implementation of a full district-wide program. As designed, SBFSSS has components that are evidence-based, setting the stage for positive results and outcomes for both generations of participants. For seniors who are homebound, projected benefits are improved knowledge of the teen generation, reduced social isolation, and improved self-efficacy, overall health and well-being. For teens, projected benefits are improved knowledge of the senior generation, improved communication (time) with non-peers, and improved self-efficacy, overall health and well-being. Because school buses can access all areas, no matter what region of the state or country, the implication that SBFSSS can be implemented in any school district can be actualized.

## **CHAPTER FOUR – Evaluation Plan**

### **Introduction**

A SBFSSS program evaluation is needed to determine: 1) the effectiveness of SBFSSS in achieving the above outcomes for students and seniors, 2) the value of SBFSSS to the community, 3) the program components which could be improved, 4) the cost-effectiveness of the program, 5) satisfaction of all stakeholders, and 6) the implications for expansion and sustainability, given that the initial trial program involves only 2 school district bus routes.

Most importantly, outcome information/data is primarily intended for participants and the authorizing school board to determine the program's effectiveness in meeting goals, to validate its presence and need. Positive program benefits and participant satisfaction are also valuable to current and potential participants, as well as referring agencies. Cost-effectiveness related to outcomes would be needed by financial supporters. Information on program process components which require change is needed by support and operations staff. All of the aforementioned information is needed for ongoing analysis, synthesis and problem solving by the OT program administrator and authorizing stakeholders (school board, school administrators) to adapt, sustain, and progress SBFSSS beyond its trial phase.

Overall, a formative approach to program evaluation at the trial stage plays a dominant role in the development of SBFSSS. Information regarding operations, guidelines, and program procedures is necessary to ensure program integrity. The formative approach is valuable to discern what adjustments need to occur in program



implementation to produce theorized outcomes. A summative approach plays a secondary role as a relatively small number of trial participants will be assessed pre- and post-program for comparative outcomes. However, as the program's operational processes become more cemented, and SBFSSS expands to full school district implementation, the emphasis on outcomes (reduced social isolation, improved communication with non-peers, improved knowledge of the other generation, and improved health and psychosocial well-being) will then be the focus and the summative approach to program evaluation will be primary.

#### **Evaluability Assessment**

A 12-member assessment team will be assembled, consisting of representatives from all stakeholder group including: authorizing (school board and administrators, teachers, transportation department, parents), participating (student, homebound senior), funding (government agencies, banks) and administering/operating (program manager, bus driver, scheduler). SBFSSS program information will be distributed prior to the meeting, which will be held in the transportation building on the grounds of the high school. The agenda will include presentation of the logic model (See Appendix A), with a melding of realistic stakeholder needs and goals with the design of the evaluation process. Group consensus on priorities, program activities, goals, and changes is the aim of the meeting, with a commitment to utilize and convey the evaluation information to all stakeholders.

### **Core Purpose**

The core purpose of the SBFSSS program evaluation, in its infancy (trial phase), is descriptive, to determine what is going on in the program, to insure it is being implemented in the manner, in which it was intended (Niemeyer, n.d.). Information such as: the number of senior and student participants recruited, how well occupations are matched/scheduled between student and senior, bus drivers' input on visit schedules, the number of intergenerational visits made and factors influencing attendance, program satisfaction from all stakeholders, and the average cost/visit can help guide adjustments to the process. Yet, because the trial program evaluation includes pre and post-program surveys/tests, a secondary core purpose is relational. When SBFSSS is fully implemented, at a district-wide level, the program evaluation then, will be primarily relational, to link intergenerational visits with improved health and psychosocial well-being of participants.

### **Scope and Time Frame**

Most meetings, interviews, training sessions, and data collection will be held in the transportation building on the campus of the high school, a central location. However, interviews and assessments for homebound seniors will occur at their homes and/or by telecommunication.

Initiation of SBFSSS will correspond with the school district's calendar. Using RTMSD as an example, an evaluability assessment will start in Oct 2019 and be completed prior to the school budget approval meeting in January 2020. Recruitment of students will begin in Spring 2020 until a minimum of 20 is obtained. Volunteer seniors

will be recruited in Summer 2020 and ongoing, until a minimum of six per bus route is obtained. (See previous chapter on program description for inclusion criteria for students and seniors). Target date for program implementation will be October 2020. Initial assessments, questionnaires and interviews of program participants will be conducted in September 2020 (pre-program), and after the final 12th visit (post-program). Satisfaction surveys will be sent to referral sources, school officials, transportation staff, program assistant, volunteers and teachers post-program. Additionally, financial records, scheduling information, and referral data will be analyzed. All assessments, interviews, outcomes and data will be collected by January 2021, and included for analysis; final report to stakeholders on the trial SBFSSS program will be completed by April 2021.

### **Evaluation Questions**

The stakeholders of SBFSSS have varied needs and priorities, from which questions are generated, and that are answered by a program evaluation. School board, administration, faculty questions: what is our liability and financial cost? What are the outcomes for students and seniors? Will academic time be compromised? Transportation department questions: Do we have input on efficiency of the program – visit timetables, scheduled visits/routes? Is there financial support for bus maintenance, as well as bus drivers? Student and senior participant questions: how will I be matched to a partner, how will I benefit from this program? Will I be safe? Program administrator and staff: Is the number of participants sufficient to carry out a trial program? Are 12 visits enough to show a significant change? What are reasons for missed visits? Does gender affect outcomes? Are projected outcomes being met? Are all stakeholders satisfied with the

program? Can matching and scheduling be more efficient? Funding sources: What is the cost per visit? Is there enough financial backing to support the full trial, and district-wide implementation? Is the program effective to continue financial backing? Program evaluation information and results will be communicated appropriately to stakeholders based on their questions and needs.

### **Research Design**

SBFSSS as trial program, may not have an adequate number of participants (students and seniors) to properly represent the “heterogeneity of the study populations” (Niemeyer, n.d. p. 17); it is also not ethical to withhold an SBFSSS intervention for a control group. Therefore, in lieu of a randomized controlled trial, SBFSSS represents a quasi-experimental basic time-series design, as “repeated measures are taken of a single group before and after receiving the intervention, without establishing direct causation” (Niemeyer, n.d., p. 18); more specifically, it is two different groups (students and seniors) that are assessed before and after program implementation measuring different outcomes or program influences. For seniors, perceptions of the younger generation, feelings of social isolation, self-efficacy, and general psychosocial well-being and health are the repeated measures. For students, sense of ageism and feelings of the older generation, time spent communicating with adults, self-efficacy, and general psychosocial well-being and health are the repeated measures. Whether senior or student, the participant is his/her own control; change is measured within individuals by comparing repeated measures/data before and after program implementation.

### Gathering Data: Application and Assessment Measures

Basic demographic information will be included in program applications for both senior and student with initial identifying information (see Appendix A, Appendix B for sample applications). Thereafter, each client will be assigned a participant number to enable appropriate coordination of pre- and post- measures but de-identify subjects for privacy. As part of the application process, both participants will complete a Modified Interest Checklist (see Appendix C), based on MOHO, to explore and assess preferred occupations. This checklist concludes with a listing of the top 3 desired occupations, setting the stage for matching with the other generation.

Table 4.1, Summary of Assessments for Participants of SBFSSS depicts the evaluations and questionnaires that will be administered to the participants of the SBFSSS pre-program and post-program to determine effectiveness and objective change.

Table 4.1: Summary of Assessments for Participants of SBFSSS

Assessments	Teens	Seniors
General Health & Well-Being	Dartmouth COOP charts (teens)	Dartmouth COOP charts (adults)
MEPSI "PERSONAL ATTITUDES SURVEY"	"Identity vs. Role Confusion"	"Integrity vs. Despair"
Perception of the others	Fraboni Scale of Ageism	Perception of Teens Questionnaire**
Current problem – generation specific	Survey re: "Time & Occupations"	UCLA 3 Question Loneliness Scale
	*author created	**author created

Collecting information from pre- and post-program assessments and interviews

represents a mixed methods approach for obtaining both quantitative and qualitative data.

The Dartmouth CO-OP Functional Health Assessment Charts will be administered to both senior and student participants to measure general health and well-being. Similarly, the MEPSI (Modified Erikson Psychosocial Stages Index) will be administered to both generations as well. Both assessments have distinct versions/subtests for seniors (adults) and for teens. Stemming from the basic same framework, these assessments are quite suitable for comparisons.

The Dartmouth COOP Functional Health Assessment Chart for Adults is found in Appendix E, and for teens in Appendix F. It was designed to look at health and well-being as the ability to adapt subjectively and objectively to the environment, regardless of medical diagnosis or disease (The COOP/WONCA Charts (1995). This aligns with occupational therapy, more specifically, occupational adaptability from MOHO, a theoretical foundation of SBFSSS discussed earlier in Chapter 2. The COOP/WONCA Charts are heralded by primary care physicians of WONCA (World Organization of National Colleges, Academies of Family Physicians) as a valid and reliable measurement with easy clinical utility, even editing the name as the COOP/WONCA Charts; the 1998 version in Appendix E is free (The COOP/WONCA Charts, 1995). The concurrent validities of the adult and teen versions are similar at .64 and .62. Test retest reliability for teens was .77 (Spieth, 2001, p. 68). There is high utility and world-wide use of the COOP/WONCA in general practice and it is available in many languages. Teens self-report using 5-point Likert scales in areas such as physical fitness, emotional feelings, school work, social support, family communications and health habits while adults self-

report in areas of general health, physical fitness, daily activities, feelings, and social activities (see Appendices E and F).

The MEPSI subtest for adolescents/teens is comprised of questions related to identity versus role confusion (see Appendix G). The MEPSI subtest for ages 35-65 are comprised of questions related to generativity versus stagnation (see Appendix H), and for ages 65+ are comprised of questions related to ego integrity versus despair (see Appendix I). Authors' instructions are to use the name "Personal Attitudes Survey" when administering the self-reported MEPSI tests (Darling-Fisher, C. & Kline Leidy, N. (n.d.). SBFSSS utilizes these measures of attitudes about the self for self-efficacy.

To assess self-perception and knowledge of the teen generation, the Perception of Teens Questionnaire will be administered to senior participants pre- and post-SBFSSS program (see Appendix J). It is author developed, based on reported misconceptions about teens (Yates, 2014), and it follows a similar format to the Fraboni Scale of Ageism (see Appendix K), which will be administered to the teens regarding their feelings and knowledge about seniors (Fraboni, Saltstone, Cooper, & Hughes, 1990). There were no such standardized assessment or survey in the literature search to assess seniors' perception of teens. Despite ageism being a stereotyped view of age, the Fraboni Scale of Ageism is unidirectional, which may be considered ageism of assessments.

Separately, seniors' social isolation feeling scores (qualitative ordinal) and teens' report of time communicating with adults/seniors and time engaged in various digital and non-digital occupations (quantitative interval data) will be obtained. There are some assessments which have been popular in studies of senior social isolation and loneliness,

including the Lubben Social Network Scale-6 (Lubben, et al., 2006), Duke Social Support Index-10 (Wardian, Robbins, Wolfersteig, Johnson, & Dustman, 2012), the de Jong Giervald Loneliness Scale (South Gloucestershire Council, n.d.), and the Social Disconnectedness Scale and Perceived Isolation Scale, both from Cornell and Waite (2009). A summary of these assessments represents a dichotomy which asks objective questions related to family and friends (measure of social connectedness), and subjective feelings of loneliness and isolation (perceived feelings). Only 1-2 questions at most from these assessments addressed social contact with others, beyond family or friends which is one of the goals of SBFSSS. A change in the number of family or friends visiting or contacting the senior will not be a direct effect of participation in SBFSSS, assuming the senior does not include the newly visiting student, a friend. Therefore, none of these assessments are appropriate. The best assessment for SBFSSS with notable psychometrics is the UCLA 3 Question Loneliness Scale (see Appendix L), which asks “how often do you feel: 1) that you lack companionship, 2) left out and 3) isolated from others?” (Hughes, Waite, Hawkley, & Cacioppo, 2004), and the individual answers with categorical frequencies. Despite it being named a Loneliness scale, it does have a question regarding isolation.

A questionnaire, Teen Use of Time (see Appendix M), specifically assesses how teens spend their time, how they communicate with others and amount of time spent engaging in digital and non-digital occupations. It is author developed using formats of questionnaires from Pew Research and Common Sense Media as guides. These previous questionnaires did not address the specific information that SBFSSS seeks to address,



though similar in nature.

A flow plan of data collection for these pre- and post-test assessments will be established. Participants' outcome results will be de-identified and coded numerically for privacy. In addition, qualitative satisfaction with the SBFSSS program will also be assessed from participants and other stakeholders, using a Likert ordinal scale with open-ended questions re: strengths and areas of improvement of the program. The satisfaction survey can be seen in Appendix N. In addition, quantitative data collection regarding number and duration of visits, bus time schedules and finances will be tracked.

All initial and final interviews will be conducted in person face to face, via phone or via Skype. All assessments are self-reports and can be completed on-line electronically during interviews or separately, coded with nonidentifiable numbers. Volunteers may also utilize tablets to help homebound seniors input information for on-line assessments if they do not have a computer. All data related to summative outcomes will be utilized to promote program effectiveness and efficacy. All data related to process or operations will be utilized to improve the program itself. Analysis of all collected data will be conveyed in a final report to stakeholders.

### **Data Analysis and Reporting**

#### *General*

Demographic information will be reported in a table format based on enumerated methods: ie, average age of participants, gender percentage. Visit information will be reported similarly as average number, average duration, and cost/visit.

### *Formative*

The 3 listed valued occupations will be coded according to category (ie, music, arts, sports, computers, home-based, academics, etc.) This enumerative analysis of themes/frequencies will help streamline the process of establishing the basis for intergenerational relationships which is common occupations; frequency of themes will be reported in bar graphs to help establish efficiency and program needs. Prominent themes in satisfaction surveys by the various stakeholder groups, will be reported in a summary matrix, with example quotes. Satisfaction themes will also undergo enumerative analysis with relation to frequency to determine impact on program processes and priorities for change and reported narratively.

### *Summative*

Comparing numerical scores of qualitative outcome measures will require correlational analysis within the individual participants, as well as within groups (seniors and students). Average raw scores per group will be presented at the 2 assessment points, by type of assessment. For seniors, this will be 4 rows: social isolation, perception of teens, self-efficacy, and general health and psychosocial well-being, all qualitative data. For students, this will be 4 rows: quantity and use of time communicating with non-peers, perception of seniors (ageism), and general health and psychosocial well-being, a mix of quantitative and qualitative data.

### *Analysis*

The fixed effects method (Allison, 2005) can be applied to assess the null hypothesis that no change occurred within individuals or in either group, with

participation in SBFSSS. Analysis of difference in scores within individuals compared to average difference scores of the group will be established through methods/software of paired differences t-tests (Allison, 2005) by a proficient and professional statistician. These scores can be presented (t and/or D) with reference parameters in the same table format.

Raw data will be presented in a narrative format under a RESULTS section, analysis of data under a DISCUSSION section and a summary of the evaluation report, including future directions under a CONCLUSION section of the final report, available by end of March 2020.

### **Hypotheses**

SBFSSS aims to tackle current societal issues affecting the teen generation and the senior generation through intergenerational interventions based on common occupations. SBFSSS seeks to reduce social isolation, improve knowledge and respect for the teen generation, improve self-efficacy and increase overall health and well-being of seniors. SBFSSS seeks to reduce age-segregated communication, improve knowledge and respect for the senior generation, improve self-efficacy and increase overall health and well-being of teens (high school students). SBFSSS may even have secondary benefits for the sandwich generation who are the parents of the teens and the offspring of the seniors, though not measured in this study. This chapter has presented a number of evaluation measures and tools to insure the transition from concept to operation, to wider implementation, is data and evidence driven. Evaluating the SBFSSS process and the SBFSSS outcomes will help produce an effective program for the community at large.

## **CHAPTER FIVE – Funding Plan**

### **Pilot Program Budget**

The implementation of the SBFSSS trial is critically dependent upon the approval from the local school board (for example, RTMSD) and administration of the high school. The school board is recognized as the authority to approve the implementation or extent of “cooperative training programs that take pupils into the community during part of their educational career. To make those experiences meaningful, the Board feels cooperation with the community is essential” (RTMSD school board policies, p. 187).

#### *Marketing*

Communication about and advocacy for SBFSSS to these authorizing stakeholders would be best served with professional executive summary hand-outs distributed during school board meeting presentations, as well as in the mail. These advocacy forms could also be distributed to homecare agencies, a potential source for initial referrals of senior participants, a stakeholder as well. Printing could be donated by a community business own by district residents, and with whom the OT administrator has a prior relationship. Shipping/mailing is \$.55 for 75 advocacy executive summaries, for a total cost \$41.25.

#### *Staffing*

To implement the pilot program, the OT administrator and program assistant will utilize the manual for SBFSSS and will require four hours a week each, for a total of 16 weeks: two weeks prior to and after the 12-week pilot program: 64 hours each.

According to US News & World Report (2018) using 2017 data, the median OT annual

salary was \$83,200 or \$40/hour. One model for determining professional consulting fees without benefits (Coutou, n.d.) doubles this rate. Thus, the OT expense for the pilot program is \$5,120. Support staff in RTMSD as per published reports (2017) earn \$15.66/hour; pilot program support staff costs are \$1,002.24. Bus driver time for the pilot program including orientation is 1.75 hours per each route (of eight 45- minute visits, drop off and pick up) x \$23.96/hour x 12 weeks which is \$503.16 per route, or \$1006.32 total for two routes. District transportation administration and maintenance staff hours are minimal; these costs are covered in salaries paid for, in part, by school tax dollars, to which district residents (student families and aging in place seniors) have contributed. School board members, and high school administrators and faculty hours are also minimal and accounted for similarly. Adult volunteers are needed to help supervise and ride with the students on the buses, no cost is incurred. Adult volunteers are recruited through the Parent Teacher Group (PTG), local RSVP (Retired Seniors Volunteer Program) or through the Lion's M.A.N.E (Mature Adults Nurturing Education) club at the high school.

### *Consultants*

In preparation for projected growth district-wide beyond the pilot program stage, SBFSSS will need the skills and knowledge of business, marketing and operational experts. The Service Corps of Retired Executives (SCORE) has a chapter in Philadelphia and SBFSSS would seek out their free mentorship in these areas. The addition of a grant writer consultant would improve the possibilities and probabilities of securing future funding. An hourly rate of \$80 for 20 hours of grant writing assistance for a total of

\$1,600 (personal communication, S. Rubenstein, Feb. 17, 2019) at the pilot program stage is advantageous given the various grant deadlines. The formal designation of SBFSSS as a non-profit organization 501(c)(3), would need to be established to enable and secure substantial grant funding; this cost is roughly \$1300 including IRS fees.

### *Operations*

Physical space for SBFSSS can be found in the district's transportation department building located on the grounds of the high school, on the grounds where the buses remain parked, and from where students will depart. Operations for the pilot program will utilize the OT administrator's personal laptop, and a school-leased laptop for the program assistant, both with appropriate applications of Microsoft Office already downloaded. Personal or school-based printer/scanners will be utilized as well. VersaTrans software is the current program utilized by the district's transportation administrator to determine bus routes and student locations; it can be applied similarly to homebound senior locations at no additional costs. Application forms, questionnaires, and assessments can be accessed, completed and retrieved through Google Forms. Thus, there are no projected costs for these operational components of the pilot program.

Any supplies for occupation-based visits (crafts, gardening, etc.) will be solicited as donations from local craft stores, businesses, and school-based programs for this pilot program. Total estimated budget for pilot program of SBFSSS for primary staffing and mailings: \$7,169.25. Adding grant writer fees and the establishment of nonprofit status at this critical time: \$2,900.

### **Second- and Third-Year Budgets**

With the success of the pilot program, SBFSSS will be implemented district-wide in its second and third school years. For example, there are approximately 30 bus routes in the local RTMSD. According to an epidemiological study published in the Journal of American Medical Association in 2015 (Ornstein, Leff, Covinsky, et al., 2015) 5.6% of those seniors living in their own homes aged 65+ are homebound. In the RTMSD, that would represent about 8 potential homebound senior participants for each of the 30 bus routes covering the district's boundaries. Senior participant inclusion requirements of willingness to have visits from students, to have background clearances, and to have an objective, appropriate safe home assessment for students, would lead to a projection of 5 senior participants per bus route for a total of 150.

A complete run of the SBFSSS program would include the actual 12- week program of visits, and a one week pre- and a one-week post-program administrative time for a total of 14 weeks. In a school calendar year, there are 38 weeks. This would enable the SBFSSS to be implemented two times in a school year, offering intergenerational visits for 75 pairs each time.

### *Marketing*

Informational, professional, health literate brochures would need to be created and distributed district wide via US mail, at a reduced rate due to non-profit status. Seniors value mail management in their daily routines. In addition, awareness of the program to friends, neighbors and relatives leads to referrals to the program. Creation of the brochure would be a collaboration of donated creative services from graphic designers,

printers in the community or art students. Printing can also be done through the school district's print and mail shop or through a local student's family owned print shop. Additional inserts for referring agencies are needed for more detailed program specifics. Maximum printing if needed, and bulk mailing cost are \$3,000.

Information about SBFSS can be also announced on the district's website, on the district's free cable TV channel, and at PTG meetings of all schools, in addition to school board meetings. Information to potential high school student participants can be conveyed on Schoology, a learning platform downloaded on every laptop that the district issues to each student, and which provides easy and direct access to information. In addition, communication about SBFSSS can also be announced during morning announcements at the high school. There is no cost for these forms of electronic marketing. Social media such as Facebook, Twitter, Instagram and LinkedIn can also capture the attention of the "sandwich generation" with both familial generations: teens in high school and aging parents in the district. These are free platforms.

A dedicated simple website for marketing, as well as program operation for accessing all forms, would be warranted by the 3rd year. The initial cost and maintenance from a web designer is roughly \$1,000 for the first year, \$250 thereafter, and a domain is \$20 for the first two years and \$18 annually thereafter (personal communication, C. Westcott, Feb. 13, 2019). The host such as godaddy.com is \$12/month. Annual cost for this dedicated website in year 2 is \$1,164 and year 3 is \$414.



### *Staffing*

Dedicated OT consulting services continue to be needed, outside of the traditional pediatric school-based OT services. With the growth of the program to full district, the OT administrator will need to increase hours to 20 per week x 30 weeks at a cost of \$48,000. COTA hours will need to increase to full time, 35 hours per week x 10 months. Based on the median annual salary of \$59,310 for a COTA (US News & World Report, 2018) the cost for the 2nd and 3rd years (10 months each) is \$49,425. The program assistant will need 16 hours per week x 28 weeks x \$15.66/hour is \$7,015.68.

With an estimated five visits per established school bus route, two routes can be combined into one SBFSSS route of 10 visits each. This will 2.25 hours of bus driver time per each of the new 15 SBFSSS routes, at \$23.96 per hour is \$808.65 per week. 12 weeks of bus driver salaries is \$9,703.80 for the 2nd and 3rd years each.

Total salary expenses for the second and third years are each \$114,144.48. There is the possibility that the school district will be willing to cover the salaries of the bus drivers and the program assistant, which may be seen as extended hours to already hired employees.

### *Operations*

Office space will be required. If the high school or district offices cannot provide an office area/room, community office space can be rented. For \$350/month, HeadRoom of Media includes rental of 50 hours of shared office space, mailing address, phone, printer/scanner, internet, etc. (HeadRoom, n.d.); each added hour costs \$10. For about 60 hours/month, which is appropriate for the implementation of this program, estimated

costs for one school year (10 months) are approximately \$4,000 per year.

Dedicated laptop computers for the OT administrator, COTA and program assistant are needed for program participant applications, assessments, interviews, data collection, master scheduling, access to the website and electronic communication. If the school district is unable to supply these, the estimated cost for three laptop computers, virus protection and insurance would be 3 x \$517, or \$1,551; Microsoft 365 for all, is \$99 for the appropriate applications, which is \$1,650 total for computers for the first year (BestBuy, February 2019). Thereafter, for the next three years, the cost would be \$99 to maintain Microsoft 365.

Supplies if not donated by the school or local businesses for common occupations (newspapers, knitting supplies, craft supplies, music sheets, etc.) may be \$125/month or \$1,250 for the school year. The total estimated budget for the second year of SBFSSS is representative of the status as a district-wide program increasing to \$126,008 and to \$123,736 in its third year. Table 5.1 is a Summary of Costs for SBFSSS, the trial program and the full district program in the second and third years thereafter.

Table 5.1 Summary of Costs for SBFSSS

SBFSSS Program Component	Pilot Program & 1 <sup>st</sup> School Year	2 <sup>nd</sup> & 3 <sup>rd</sup> School Years	Cost if school district funds
Marketing: <u>Printing And Mailing</u>	Donated printing services from local businesses; mailing costs only \$41	Printing services and brochures sent district-wide and to referral sources \$3,000	\$0
Web Design & Maintenance	Not needed	2 <sup>nd</sup> year \$1,164 3 <sup>rd</sup> year \$414	\$0 \$0
Staffing	OTR, program assistant, bus driver(s) \$7,128	OTR, COTA, program assistant, bus drivers \$114,144	program assistant and bus drivers \$97,425
Consultant: Grant Writing	\$1,600	\$800	\$800
Non-Profit Status	\$1,300		
Operations	Physical space on school grounds \$0	Shared office space with amenities \$4,000	\$0
	laptops, printers, phone use, etc. (personal and donated) \$0	3 laptops 2 <sup>nd</sup> year, virus protection, Microsoft 365 \$1,650	\$0
		3 <sup>rd</sup> year virus protection and Microsoft 365 \$128	\$0
Supplies for Common Occupations	Donated from community \$0	Crafts, gardening, newspapers, cards \$1,250	\$0
<b>TOTAL ESTIMATED COSTS</b>	\$10,069	2 <sup>nd</sup> year \$126,008 3 <sup>rd</sup> year \$123,736	Savings: 2 <sup>nd</sup> year \$98,225 3 <sup>rd</sup> year \$98,225
Cost with school help		2 <sup>nd</sup> year \$27,783 3 <sup>rd</sup> year \$25,511	

## **Potential Funding Resources**

### *Local (School District, Businesses, Township Governments)*

RTMSD will continued to be utilized as an example school district for description of specific funding sources. The superintendent of RTMSD, James Wigo, in describing “Partners in Learning,” reports the mission of the district is to “strive to have our students develop into productive citizens who contribute to their communities and the world. Supporting their efforts are tax payers who make quality public education possible and their representatives on the School Board who exercise stewardship of the community’s fiscal resources and develop plans for the future” (Wigo, 2017–18). The acknowledgement of the connection between student contributions to the community, and support of tax paying residents, would appear to lend support for a program such as SBFSSS. In addition, SBFSSS helps high school students to fulfill their graduation requirement of community service. The school district’s permission and authorization for school buses and student engagement in SBFSSS is essential for program implementation.

On a practical note, school buses are an untapped resource, idle during the day when not used to transport youth to and from school, morning and afternoon. Other operational support for SBFSSS from the school district could be extensions and/or donations of current resources: a physical space in the transportation department or high school building, maintenance of buses, computer laptops (issued to all teachers and students), salaries of bus drivers and one support staff, supplies for common occupations, and printing/mailing/video costs for dissemination of information. It is anticipated that

the school district's contribution of the above program components could make an enormous impact. For example, a second-year budget of \$126,008 could be reduced to \$27,283.

Other potential local resources for funding are the banks and the 4 district township governments, all of which have a history of donating at least \$200 each, for each school-based annual carnival and/or festival. Combined, these potential resources could fund approximately \$7,000 of SBFSSS program costs.

#### *County Level*

The Foundation for Delaware County funds non-profit groups serving the residents of Delaware County (The Foundation for Delaware County, n.d.). RTMSD is in Delaware County and as such, SBFSSS would serve both senior and teen residents. SBFSSS aligns with two areas of this foundation's focus: "helping seniors age in place ...and inspiring teens to succeed" (The Foundation for Delaware County, n.d.). This foundation has previously funded projects which, like SBFSSS, focus on aging in place seniors, home care agencies, and inspiring teens ranging from \$15,000 to \$40,000 (The Foundation for Delaware County: non-profits, n.d.). Potential funding from the Foundation for Delaware County may be \$10,000 for the initial pilot program and \$30,000 for each year thereafter.

#### *City (Philadelphia) and State Level*

SBFSSS as a program in the suburbs of Philadelphia, can benefit from funds targeted for the Greater Philadelphia Area. With its global focus in reducing poverty and oppression by focusing on leaders who are attempting to change communities, the M.

Night Shyamalan Foundation is locally based in the RTMSD (M. Night Shyamalan Foundation, n.d.). The Shyamalans have presented at the local high school, with their more recent goal to provide more local assistance. Their foundation has previously funded a program to help high school students in Philadelphia better prepare for post-secondary education with \$50,000 (Zeglen, 2019). SBFSSS addresses the occupational and related economic injustice of homebound seniors, the better preparation of students for post-secondary success, and overall community health and well-being. Aligning with the mission and values of the M. Night Shyamalan Foundation, SBFSSS may anticipate a similar contribution of \$50,000 annually.

The Pew Fund for Health and Human Services in Philadelphia focuses on the frail elderly in the greater Philadelphia Area, specifically targeting programs that reduce social isolation; it recently funded SOWN (Supportive Older Women's Network) to combat depression in elderly females with a \$120,000 contribution (The Pew Charitable Trusts, n.d.). SBFSSS is a program that directly aligns with this mission of reducing social isolation; thus, the anticipated contribution from the Pew Fund is \$100,000.

The Scattergood Foundation Community Fund believes that “major disruption is needed to build a stronger, more effective compassionate, and inclusive health care system - one that improves well-being and quality of life as much as it treats illness and disease” (Scattergood: Think, Do, Support. (n.d.), with a focus on mental health. The Scattergood Foundation awards “grantmaking” funds to projects in the greater Philadelphia area with national implications, from \$5,000 to \$50,000 (Scattergood: Think, Do, Support. (n.d.). SBFSSS addresses the health and well-being of seniors and

teens which are universal concerns and have obvious national implications. Possible contribution to SBFSSS could be the median \$27,500.

### *National Level*

SBFSSS addresses current issues: age-segregated communication of teens using cell phones and multi-media, and social isolation of aging in place seniors. Health and well-being of the community are the goals. These issues extend beyond the local school district and thus have impact on a national level. Application to various national foundations and agencies with similar vision and focus for possible funding and support is a critical step in program implementation, growth and sustainability.

For example, to reduce cell phone use and enhance family communication, the “Cell Phone Coop Challenge,” offered in 150 Chik-Fil-A restaurants, is a cardboard box with preprinted instructions to place all cell phones inside for the duration of the family meal (Dicker, 2016). If successful, all receive a free dessert. Coincidentally, there is a Chik-fil-A restaurant within walking distance of the high school, often partnering with sports teams and clubs in providing food for fundraising. Initially, this local restaurant may be able to provide food coupons for students abstaining from cell phone use (except for emergencies) during SBFSSS visits. On a national level, the Chik-fil-A Foundation sponsors on-going partnerships with programs and organizations which align with their goal of “helping every child become all they can be” (Chik-fil-A Foundation, n.d.). Chik-fil-A sponsors on-going partnerships for “tools, resources and support” An example is the corporate sponsorship for the Elk Grove Teen Center USA \$50,000 (The Chicken wire, 2016). Perhaps, initially Chik-fil-A could provide food coupons rewarding student

abstinence from cell phones except for emergencies, during intergenerational visits. For second and third years of SBFSSS implementation, the Chik-fil-A Foundation may be a potential funding source for \$25,000 annually.

Two organizations which advocate and invest in multi/intergenerational programs of youth and seniors are The Eisner Foundation and Gen2Gen, which offer the Eisner Prize and the Encore Prize, respectively (The Eisner Foundation, n.d.; Gen2Gen: Encore Prize, n.d.). The Eisner Foundation “identifies, advocates for, and invests in high-quality and innovative programs that unite multiple generations for the enrichment of our communities” (Eisner Foundation, n.d.). Though grants are restricted to the Los Angeles area, there is a nationwide Eisner Prize (Eisner Foundation, n.d.), which is a potential source of funding for SBFSSS. California-based grants are potential funding sources for SBFSSS expanding in that state, possibly by year 4 of its implementation.

“Gen2Gen is Encore.org's campaign to mobilize 1 million adults 50+ to stand up for — and with — young people today” (Gen2Gen: About us, n.d.). They have funded projects with similar themes to SBFSSS such as senior center services for \$15,000, county home care agencies for \$30,000, and school-based arts programs, up to \$40,000 (Gen2Gen: Encore prize, n.d.). Its mission is the inter-generational relationship especially adults 50+, for the benefit of all. It seeks to align with other partners with the same vision. Hopefully, SBFSSS will be a partner with a potential prize of \$10,000.

The Robert Wood Johnson Foundation (RWJF) has a mission on building a culture of health in four areas. Two of these areas, in particular, “Healthy Communities/Social Determinants of Health” and “Health Systems/Public and



Community Health” (The Robert Woods Johnson Foundation, n.d.), directly align with the goals of SBFSSS. RWJF encourages applicants to apply for complete funding of a project. SBFSSS would be submitted as a “Pioneering Idea” (The Robert Woods Johnson Foundation, n.d.), with possible funding for 3 years for \$260,000.

Table 5.2 is Summary of Potential Funding Resources, listed in the order in which they were presented above: local, county, city/state, and national.

Table 5.2: Summary of Potential Funding Resources

POTENTIAL FUNDING SOURCE	POTENTIAL CONTRIBUTION
<b>Local Banks</b> <ul style="list-style-type: none"> <li>Bank of America,</li> <li>Franklin Federal Credit Union</li> <li>Santander</li> <li>Iron Workers Bank</li> </ul> <p>All have a history of supporting school-based district events.</p>	<p>Combined annual anticipated donations from local banks</p> <p>\$5,000</p>
<b>4 Local Governments within RTMSD</b> <ul style="list-style-type: none"> <li>Media Borough</li> <li>Upper Providence Township</li> <li>Edgemont Township</li> <li>Middletown Township.</li> </ul> <p>All have a history of supporting school-based district events.</p>	<p>Combined start-up &amp; annual continuance \$2,000</p>
<b>The Foundation for Delaware County<sup>a</sup></b> <ul style="list-style-type: none"> <li>Helping seniors, inspiring teens</li> <li>History of supporting programs with similar themes.</li> </ul>	<p>Pilot program \$10,000</p> <p>2<sup>nd</sup> and 3<sup>rd</sup> years for each \$30,000</p>
<b>M. Night Shyamalan Foundation<sup>b</sup></b> <ul style="list-style-type: none"> <li>Shyamalans are residents of the local school district.</li> <li>Support emerging community leaders to help with program sustainability</li> </ul>	<p>Annual projection \$50,000</p>
<b>Pew Fund for Health and Human Services in Philadelphia<sup>c</sup></b> <ul style="list-style-type: none"> <li>Focus on the frail elderly by reducing social isolation</li> <li>Funded program to combat depression in frail females<sup>c</sup></li> </ul>	<p>\$100,000</p>
<b>The Scattergood Foundation Community Fund for Wellness Grant<sup>d</sup> (in greater Philadelphia)</b> <ul style="list-style-type: none"> <li>Focus is on mental health</li> <li>Philadelphia based projects with national impact</li> <li>History of prior grantmaking awards</li> </ul>	<p>\$27,500</p>

POTENTIAL FUNDING SOURCE	POTENTIAL CONTRIBUTION
<b>Chik-fil-A Foundation<sup>e</sup></b> <ul style="list-style-type: none"> <li>Values reduction in cell phone use during meals</li> <li>RTMSD are frequent customers</li> <li>Funds programs maximizing potential in each child<sup>e</sup></li> </ul>	(Food coupons, 1 <sup>st</sup> year)  2 <sup>nd</sup> and 3 <sup>rd</sup> years      \$25,000
<b>The Eisner Foundation<sup>f</sup></b> <ul style="list-style-type: none"> <li>Grants to California based agencies</li> <li>Prize for a nationwide intergenerational program<sup>f</sup></li> </ul>	Eisner Prize      \$10,000
<b>Gen2Gen<sup>g</sup></b> <ul style="list-style-type: none"> <li>Funds intergenerational programs</li> <li>Seeks partners with the same vision</li> </ul>	Encore Prize [8]: Semi-finalist award      \$10,000 Single final prize is      \$50,000
<b>The Robert Wood Johnson Foundation (RWJF)<sup>h</sup></b> <ul style="list-style-type: none"> <li>Focus on social determinants of health</li> <li>Supporting health in communities</li> <li>Encourages application for full funding for years</li> </ul>	3 years      \$260,000

<sup>a</sup>The Foundation for Delaware County (n.d.). <sup>b</sup>M. Night Shyamalan Foundation (n.d.). <sup>c</sup>Pew Fund for Health and Human Services, Philadelphia (n.d.). <sup>d</sup>The Scattergood Foundation Community Fund (n.d.). <sup>e</sup>Chik-Fil-A Foundation (n.d.). <sup>f</sup>The Eisner Foundation (n.d.). <sup>g</sup>Gen2Gen (n.d.). <sup>h</sup>The Robert Wood Johnson Foundation (n.d.).

### Conclusion

Table 5.1 is a summary of components of the SBFSSS program in its first pilot program year and the two years following with district wide implementation. An added final column shows the reduced cost if the school district can make contributions. Aside from minimal postage costs, SBFSSS, primarily has only salary costs for an OT administrator and program assistant in its first year as a pilot program. All other program components (space, equipment, consultants) are donated by the community. After the pilot program is complete and before the next school year, the interim period has costs for establishing a nonprofit status and for grant writing fees.

In the second year of full district wide implementation, SBFSSS expands in its need for marketing and dissemination of information, physical space and electronic

devices, staffing, consulting and supplies. Yet, if the school district can contribute space, equipment and electronic devices, web design consulting, printing and postage, and salaries of the bus drivers and program assistant, annual costs would be reduced. Seniors residing in the school district do continue to pay school tax, despite no longer having children attending school. It would seem appropriate that they have the benefit of these taxes, such as the use of school buses to transport student visitors to them, when their ability to egress declines. School contributions to the SBFSSS program can greatly affect annual costs as seen when comparing the two right hand columns of Table 5.1. SBFSSS as a line item on the annual school budget would help solidify the program's sustainability in subsequent years.

The potential resources for funding are listed in order of discussion in Table 5.2. Because SBFSSS encompasses two age groups or generations, funding can be sought in many different domains. RTMSD is located in the suburbs of Philadelphia and can draw support at different levels: school district, county, city (outside of a metropolitan area), state, and national. By addressing current trends (increased use of electronic media in teens and increased population of aging in place seniors) with problematic effects (age-segregated communication and social isolation, respectively), SBFSSS aligns with the missions of multiple organizations and foundations. The health and wellness of the community are effectively addressed utilizing its own members. Efficient and effective use of quality common occupations is our best resource in an overburdened healthcare system; aligned with funding agencies whose values are similar, SBFSSS can make a significant difference locally, nationally, globally.

## **CHAPTER SIX – Dissemination Plan**

### **Dissemination of Information: Outcomes, Effectiveness and Sustainability**

For participating seniors, the positive outcomes and benefits of participating in SBFSSS are the reduction of feelings of social isolation, increased knowledge of the younger generation, improved self-efficacy, and improved overall health and well-being. For participating teens/high school students, the positive outcomes and benefits are improved amount of time communicating in person with non-peers, reduced sense of ageism, improved self-efficacy, and improved overall health and well-being. Assuming the pilot program of SBFSSS has been successful and district wide implementation has occurred with these positive outcomes, the following dissemination plan is projected.

These program outcomes need to be disseminated to those program participants, current and future, who are direct beneficiaries as the primary audiences. Sustainability of SBFSSS depends on a growing pool of senior and high school student participants. In addition, due to their position to authorize the existence of SBFSSS within the district, the school board and administrators are also primary audiences to receive outcome information. Dissemination of positive outcomes and benefits to secondary audiences validates their role and needed support for SBFSSS success and sustainability. Secondary levels of stakeholders/audiences include sources of referral, funding, program support and operation.

Projected long-term health and well-being outcomes of SBFSSS senior participants could be for example, the reduction of healthcare visits by 20% in 4 years, compared to matched non-participants. For SBFSSS high school participants, projected

long-term health and well-being outcomes could be increased intergenerational community service engagement as young adults 4-5 years later, compared to students who did not participate. Improved job readiness with respect to working with and communicating with others is another long-term projected outcome, compared to nonparticipating students. These projected goals are hypothesized in the assumption of district-wide implementation with a successful trial program.

#### *Primary Audiences*

Flyers can be mailed throughout the district, directed to current and future participating seniors who may have limited electronic and social media use. Flyers will convey the above evidenced-based research benefits of intergenerational interactions for seniors on their health and wellness. Requirements for participation including district-driven background checks and willingness to have a student visit the home are key messages to convey. An application will be attached to the flyer for mailing back to the OT program administrator. An important message that will be emphasized is “health benefits WITHOUT COST to the participant.” Satisfied participants’ quotes will be included in the flyer to persuasively attract more senior referrals to the program. A dedicated phone number for person to person communication would be appropriately available to this generation. References and links to the SBFSSS website and other social media will also be listed on the flyers.

Current and future participating high school students can take advantage of the SBFSSS website for outcome and procedural information. On the website, they can view videos of an intergenerational visit and testimonies from other students about the

program's benefits. A summary and reminder of the program can be an attachment to all 11th and 12th graders' email correspondences. Other ways for dissemination of SBFSSS information are venues that are most effective for the high school. For example, in RTMSD, the following are examples of their most popular forms of communicating information to students: morning announcements, school website, weekly electronic letters from the principal, class/school-wide email correspondences, and monthly electronic letters from the guidance counselors. School authority figures have a different impact when disseminating information. Key messages are the psychosocial benefits, program requirements, logistics of bus transportation to and from the homes of seniors, and the need for make-up work for missed classes. A key point of emphasis to this audience will be the fulfillment of the community service graduation requirement through participation in SBFSSS. These key messages can also be reinforced during all school assemblies with a short presentation given by a participating fellow student, the principal, a guidance counselor and/or the OT administrator.

A general dissemination of program information and outcomes to the public (including potential senior and student participants), would be a published article in a local trade journal. For example, in a suburban school district such as RTMSD, a local journal "MainLine Today," and local newspapers "The Town Talk" or "The Delco Times," highlighting a specific intergenerational success story with benefits to both participants, would reach many. Written by the OT administrator, these articles could be disseminated in both paper and/or electronic versions.

Lastly, an annual presentation during a public, school board meeting will

disseminate program outcomes and accomplishments through multi-modal means. In person testimonies of program benefits will be conveyed by student participants and by videos of homebound senior participants. Data from pre- and post-evaluations will be presented in visual graph format. Guest physicians may validate the benefits to a geriatric and/or an adolescent patient, and the high school principal and/or guidance counselor will advocate for the growth of the program. Lastly, a district resident of the “sandwich generation” will discuss the benefits to her/his parent as well as to her/his child, validating SBFSSS as a community wellness program.

### *Secondary Audiences*

Secondary audiences are all those stakeholders who are sources of support, whether operational, financial or educational. Operational sources include transportation personnel such as bus drivers and mechanics, support staff such as volunteers and aides, and referral sources such as community agencies, homecare agencies, senior centers, places of worship, physician offices, etc. Financial sources include both local funding (banks, local governments/townships) and county, state and federal funding and grants. Educational sources include teacher, guidance counselor and/or administrative consults. These secondary audiences need dissemination of outcomes, effectiveness and application of SBFSSS to validate and justify their contributions. Key messages to these secondary audiences are the return on their investment of money, time, or skill, as seen in positive outcomes, evidence-based benefits for the participants of the community; it is key to convey that their contributions are valued currently and in the future to the program’s success; and that the SBFSSS program has the means to market their agency in



a list of supporters.

Secondary audiences can obtain program information and outcomes electronically on the SBFSSS website, through social media, or through video links. For operational and educational sources, a short bullet list summary can be emailed directly. For referring or financial sources, on site person to person or power point presentations as scheduled or requested, can focus on disseminating program information to that specific secondary support audiences. Along with the OT administrator, another presenter could be a participating student for first-hand information or a live face-time with a homebound senior. Short booklets written in the appropriate level of health literacy for a bus driver or clinician or financier, are other means of disseminating information. Personally written thank you notes from program participants are always program-validating messages to secondary stakeholders as well.

#### *Special Circumstances for Secondary Audiences*

It is important to note that the dissemination of specific outcome information to the corresponding Board of Education Committees (in RTMSD, these are Pupil Services, Curriculum, Finance, Operations, Human Resources) (RTMSD, n.d., p. 188) is critical and will be completed in the manner which the committees request (formatted, power point presentation, narrative report, etc.). Similarly, county, state and national grants may have their own specific reporting formats to account for the delineation of funds and program outcomes of their investments; summaries of outcomes would be available on the website and/or as needed, by written or electronic report.

### **Dissemination of Information: Goals for Expansion**

SBFSSS addresses current social trends affecting two generations. It takes advantage of underutilized resources (school buses) to enable program implementation and it efficiently places engagement in common occupations between a senior and a high school student, as the low-cost impetus for promoting health and well-being. All these aspects of SBFSSS are universal. Therefore, projected short-term dissemination goals are implementation of SBFSSS in other local school districts in 3 years. These short-term goals of dissemination are superseded by the projected long-term goal of implementation of SBFSSS nationwide: 75% of states will have at least one SBFSSS program in 4-5 years. The ultimate projected outcome extends even further: SBFSSS will be implemented on a global level, in at least 4 countries, within 7-10 years.

### *Primary Audience*

The expansion of SBFSSS on state, national and global levels would require dissemination of SBFSSS to other OTs, the primary audience for initiating SBFSSS programs in their respective regions. Knowledge of SBFSSS may be disseminated in non-peer reviewed journals such as OT Practice and online communities like CommunOT with links to the website. An article on the evidence-based outcomes of SBFSSS in a peer-reviewed journal such as the OT Journal of Research, would reach other OT professionals. Articles would stress the intervention of intergenerational programs as evidence-based with benefits to both generations, the use of common occupations, social capita and existing resources (school buses).

These methods of dissemination would pique interest in attending SBFSSS

courses at the various levels of OT conferences: the state association level, Pennsylvania Occupational Therapy Association (POTA), the national level, American Occupational Therapy Association (AOTA), and the global level, World Federation of Occupational Therapists (WFOT). Aside from program logistics and benefits, a key message at these conferences is the alignment of SBFSSS with: AOTA's Vision 2025, the US Government's Healthy People 2020/30, and the Constitution of the World Health Organization. Another key message is the universal application of SBFSSS as cell phone-using teens, isolated homebound seniors and school buses are present across many physical and socioeconomic boundaries. By utilizing resources already present: social/people capital, occupation and school buses, SBFSSS is a quality, efficient and low-cost program meeting the triple aims of any healthcare program (Lamb, 2017), an important message to convey. Lastly, an important message to disseminate to OTs is that SBFSSS addresses the occupational injustice of homebound seniors who cannot access programs and services.

The OT administrator of the first SBFSSS program can lead the seminars, with any other key presenters including: other OT SBFSSS program administrators from different states, teen and senior past participants in person or on video, school administrators, geriatricians, pediatricians, etc.

A written program manual with direct onsite training at a high school would be available for purchase for any OT desiring to implement SBFSSS in their region. The manual would include theoretical backgrounds, literature searches and summaries, all necessary forms and assessments, outcomes data, as well as steps for implementing a

initial pilot program of SBFSSS. All travel expenses incurred will be paid by the host school district. Any experienced SBFSSS OT program director may conduct these sessions.

### *Secondary Audiences*

The National Association of Secondary School Principals (NASSP, n.d.) holds an annual conference as well. A presentation lead by the experienced SBFSSS district principal with the OT program administrator would disseminate the value of adopting SBFSSS in other school districts. Key points to be emphasized include community integration, positive health and well-being outcomes, use of resources already present, potential resources for funding, and alignment with the school district's mission, vision and values. Videos would be shown of intergenerational visits including start (school bus transport) to finish (school bus returns).

### *Budget*

The budget for these two phases of dissemination is organized and summarized in Table 6.1. Table 6.1 entitled Summary of Dissemination, is divided into the two goals of dissemination: for improved outcomes and sustainability (top half), and for program expansion (bottom half). For the general public, which includes all stakeholders in both goals, the primary means of dissemination is a dedicated SBFSSS website, the cost for which was accounted for in the funding chapter. Other social media forms of dissemination include Facebook, Twitter, Instagram, LinkedIn which also have no costs. Other no cost dissemination means are local guest speakers who would volunteer their

time, and power point presentations. Thus, electronic and local person to person means of dissemination are essentially cost-free.

Written material costs for dissemination include additional flyers for seniors, and booklets for secondary referral and financial stakeholders. Printed manuals are costly at \$1,250 but costs are recouped when they are sold as part of a fee-based program implementation. Written reports to financial stakeholders may cost \$50-\$150 for copying and mailing.

The biggest itemized costs of the dissemination plan relate to the goal of program expansion. The travel to state, national and world-wide conferences is costly especially if air travel is needed, versus car travel. However, this means of person to person dissemination combined with multi-media modes is necessary for reaching the most stakeholders to expand the SBFSSS program.

## 6.1 Summary of Dissemination

Table 6.1

Summary of Dissemination Plan for SBFSSS

Target audience	Form of dissemination	Cost
All stakeholders and consumers. <i>Primary audience</i> • Aging in place seniors	<i>Electronic:</i> SBFSSS website, social media, (YouTube) videos of visits and testimonies	Cost of website and maintenance is in the funding plan.
	<i>Written:</i> Flyers mailed to homes and available through physician offices, homecare agencies.	Additional \$1,000 beyond initial budget, for distribution by agencies and physician offices.
	<i>Person to person:</i> Dedicated phone line for questions and answers.	\$0, included in office rental or if school donates a space/phone
• 11 <sup>th</sup> and 12 <sup>th</sup> graders	<i>Electronic:</i> email for 11 <sup>th</sup> and 12 <sup>th</sup> graders, weekly correspondence from administrators. Videos of intergenerational visits	\$0
	<i>Person to person:</i> morning announcements, school assemblies lead by a current or past student participant with OT administrator	\$0 cost for announcements and short presentation by OT administrator
	<i>Written:</i> flyers in the main office, guidance counselor offices and the vocational center.	See above inclusive cost for flyers. Written applications are projected to be fewer than those on line.
• School Board and administrators, authorizing the program	<i>Person to Person:</i> Public school board meeting with in person testimonies from participating students, local doctors, and “sandwich generation”	\$0 cost

Target audience	Form of dissemination	Cost
All secondary stakeholders listed below	<i>Electronic:</i> SBFSSS website, social media	\$0
<ul style="list-style-type: none"> <li>• School board committees</li> <li>• Local funding sources</li> <li>• County, state, federal funding sources</li> </ul>	<i>Written Reports of Expenditures and Outcomes</i> per requested formats	\$50-150/year for printing, copying, mailing costs
	<i>Written:</i> Small booklets for the agency and flyers for distribution	Small booklets \$8.64 each 100 x \$8.64= \$864 (Staples, n.d.)  Cost of flyers is included above
	<i>Written:</i> Personal accounts and thank you notes from participants	Stationery/cards: \$50 annually
<ul style="list-style-type: none"> <li>• Referral sources: senior centers, homecare agencies, places of worship, other community agencies</li> </ul>	<i>Person to person:</i> On site meetings with OT and teen participant.	\$0
	<i>Electronic:</i> videos of visits and testimonies of homebound seniors	\$0
Occupational Therapists from other school districts	<i>Electronic media:</i> SBFSSS website, CommunicOT, and social media, videos	\$0 Website maintenance already accounted for in funding chapter
	<i>Written:</i> Informational booklets on the SBFSSS program.	Booklets focused more on an OT perspective. 100 x \$8.64= \$864 (Staples, n.d.)
	<i>Written:</i> Program Manuals for implementation of SBFSSS beyond its current school district	50 forty-page SBFSSS coil bound program manuals= 50 x \$24.39 = \$1,219.50. (Staples, n.d.)  Costs recovered as manuals will be included in implementation program fees, see below.

Target audience	Form of dissemination	Cost
	<i>Person to Person:</i> On-site visits for program implementation, manual and training	Travel and operational expenses deferred to the onsite recipient facility, including instructional OT salary
	<i>Person to Person:</i> SBFSSS Program at the POTA Annual Conference	Travel expenses (Range varies based on location and distance from Media, PA)  Drive own car OR airfare and 2 nights lodging/meals= \$50- \$650, example Pittsburgh, PA*  Conference Fees: \$260
	SBFSSS Program at the AOTA Annual Conference (range varies on location from Media, PA)	Travel expenses (Range based on location and distance from Media, PA)  Drive own car/park OR airfare (\$419)* and 2 nights lodging/ meals (\$500) = \$100- \$919, example Los Angeles, CA  Conference Fees: \$451
	SBFSSS Program at the WFOT Conference	Example: So. Africa 2018: Airfare \$1,509*; 4 nights (4 x \$190) lodging and meals (\$200) = \$2,469  Conference fees: \$1,290.
Secondary: Secondary School Principals	Electronic media: SBFSSS website, social media, direct email contacts  SBFSSS program presentation at annual NASSP conference	Rental fees for list of current secondary school principals from NASSP: \$150+ \$75= \$225/month x biannual = \$550  Conference fees: \$295



Target audience	Form of dissemination	Cost
		<p>Travel expenses (Range varies based on location and distance from Media, PA)</p> <p>Drive own car/park OR airfare (\$419)* and 2 nights lodging/meals (\$500) = \$100- \$919, example Los Angeles, CA</p> <p>*Airtfares derived from google.com/airfare</p>

## **CHAPTER SEVEN – Conclusion**

It is difficult to ignore the growing trends in our society. The increasing population of seniors and the increasing use of digital media (notably, cell phones) especially among teens, affect us all, either directly or indirectly. The aging baby boomers will contribute to the growing number of those 65 and older, projected to more than double from 2016 to 2060, to 98 million (Mather, 2016). As of 2018, 95% of all teens 13 to 17 own or have access to a cell phone (Anderson & Jiang, 2018) and spend an average of 9 hours on digital media, including multitasking (Common Sense Media, 2015).

Both generations have been privy to the advances of technology. From a medical perspective, life expectancy plays a part in the actual numbers of seniors. Life expectancy has increased through biomedical research and innovation in developed countries (Lichtenberg, 2017) with large financial support from companies such as PayPal and Google investing in organizations researching ageing and longevity (Marr, 2017).

Ubiquitous ownership of cell phones among teens uniquely shows no socioeconomic disparities (Anderson & Jiang, 2018). The majority of teens report an increasing use of social platforms like YouTube (85%), Instagram (72%) and Snapchat (69%), (Anderson & Jiang, 2018). These companies, listed by name in Hartmans' report (2018), employ a number of technological marketing strategies to keep users "addicted" (Hartmans, 2018), and the cycle continues.

The majority of seniors want to age in place in their own homes (Barrett, 2014)

which, consequently, puts them at risk for social isolation. Concurrently, teens prefer texting and social media over in-person interactions (Common Sense Media, 2018), accessing peers synchronously or asynchronously at any time, putting teens at risk for age-segregated communication, limited engagement with other occupations and communication with adults (Strom & Strom, 2015). Ultimately, both generations are at risk for potential declines in psychosocial functioning, health and well-being.

Occupational therapy distinctly addresses individuals' psychosocial functioning, health and well-being through a balance of meaningful, valued occupations to enhance competence and identity. Occupational therapy facilitates occupational adaptability of individuals in their dynamic environments. For seniors, their physical, social and personal contexts are changing. For teens, their virtual, social and temporal contexts are changing. Following this Model of Human Occupation, occupational therapy can intervene to remediate the problems of both generations with SBFSSS, facilitating their overall health and well-being and that of the community to which they belong.

Though other intergenerational programs have been evidence-based in the literature, resulting in positive outcomes for both generations (Andreoletti & Howard, 2018; Chippendale & Boltz, 2015; Gruenewald et al., 2016; Murayama, 2014; Nicolson & Shellman, 2013; Thompson & Weaver, 2016), SBFSSS is distinctly unique. The innovative components of SBFSSS include: 1) the use of school buses to transport high school students, 2) visits of a social nature at the homes of homebound, isolated seniors, and 3) the use of client-centered common occupations as the basis for the intergenerational visits, for which individual choice (motivation) is critically the norm, 4)

administration by an OT to appropriately match occupations, to assess, instruct and employ strategies or equipment to enhance full participation of participants. Positive outcomes are projected to be improved knowledge of the other generation thereby reducing ageism, reduced social isolation of seniors, improved non-peer communication of teens, and increased self-efficacy, health and well-being of both generations.

Involvement in the community provides an education outside of the didactic classroom, aligning with the mission and vision of a school district such as RTMSD, a suburb of Philadelphia. As such, SBFSSS will require school board and district administration approval for an initial trial program. Concerns could be raised regarding students visiting seniors in lieu of related class time. For example, a student will miss art class in lieu of a home visit to a senior to jointly do a painting project. This is addressed with the initial requirement of teacher references/permissions, student commitment to missed work, the potential use of a team of students per senior, or the use of non-specific periods such as study hall for scheduling a visit.

Another concern of the authorizing stakeholders could be funding. SBFSSS utilizes resources which are already present, school buses, computers, and software for operations. The primary costs are personnel salaries, for which potential sources of financial support are outlined in Chapter 5, since the goals of SBFSSS align with missions and goals of other foundations and local donors.

Because SBFSSS is data driven by a number of pre- and post-program evaluations and assessments, outcomes will be reported and disseminated accordingly to all stakeholders. The authorizing school board and administration, referral sources, funding

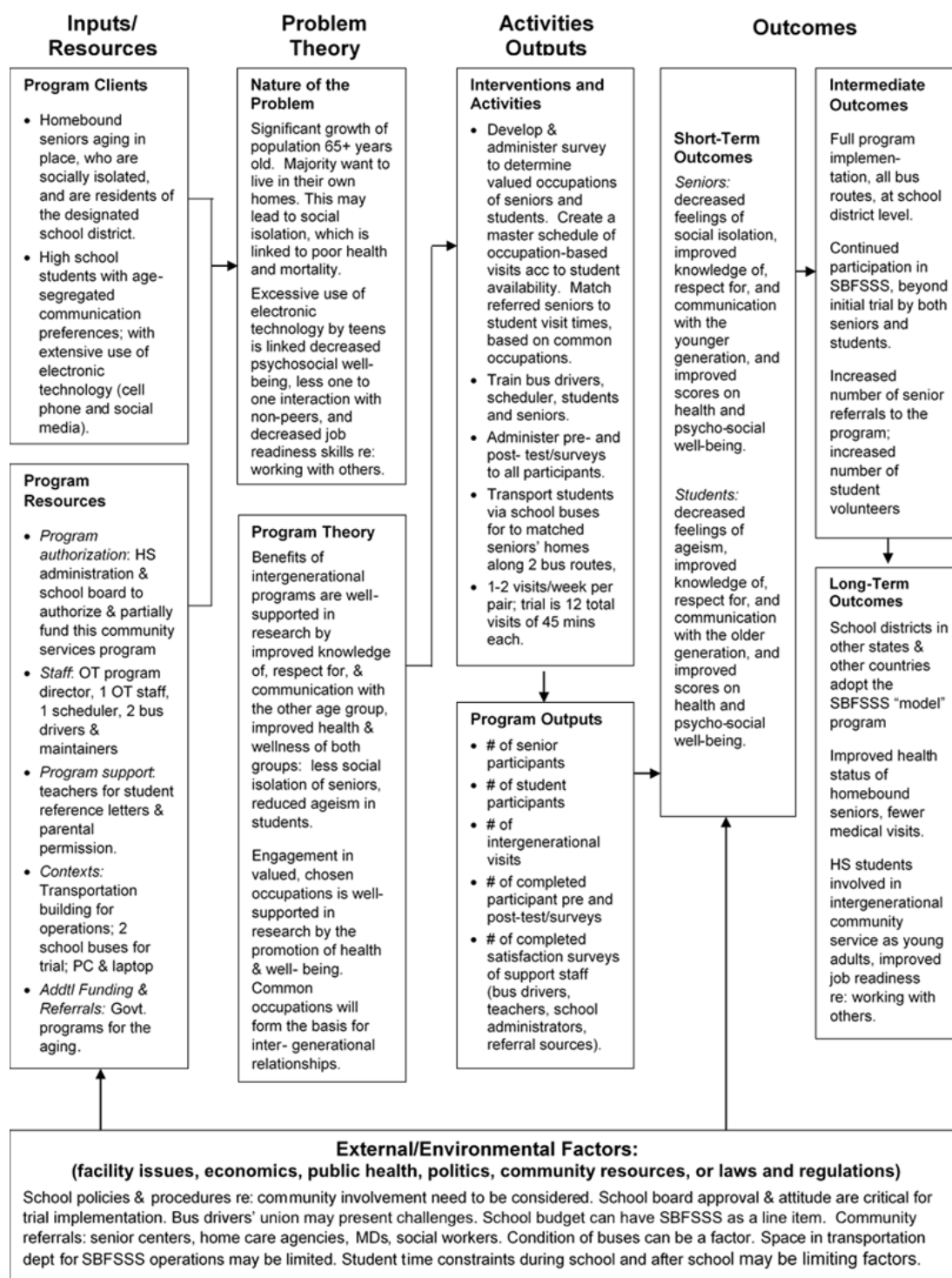
sources, participants and the community at large will be privy to the effects of the pilot program, setting the stage for district-wide implementation.

School buses, seniors aging in place, and teens with cell phones are universal. SBFSSS can be implemented beyond one suburban school district, to other local and state districts, to other states, and to other countries. School buses can and do access even the most remote houses in rural areas, where the home resident could be a child needing transportation to and from school, or an aging senior who can no longer egress from the home. The isolation of seniors aging in place, who can no longer drive or access public transportation to community social occupations, represents a growing occupational injustice. SBFSSS as an occupational therapy intervention can take the community to the homebound seniors.

Seniors and students represent social capital, both in supply and in demand. The intergenerational relationship or structure is set by the participants for either a co-partnered visit or a mentor/mentee format, with either generation taking a teaching type role. School buses are a current resource, available during the day since their runs are to school in the morning and back home in the afternoons. Common occupations may require some supplies and/or equipment which are already owned due to current engagement or can be obtained through community donations. SBFSSS as a health promoting program follows AOTA's mission to align with our national healthcare system in meeting the triple aims of reducing healthcare costs, while being both effective and efficient (Lamb, 2017; Lamb & Meltzer, 2014). The definition of health as "a state of complete physical, mental and social well-being and not merely the absence of disease or

infirmity” is a priority in the World Health Organization’s Constitution (n.d.). SBFSSS addresses global issues facing seniors and teens, and its implementation, therefore, has no physical boundaries in promoting health and well-being. SBFSSS is an example of “think globally, act locally” demonstrating the practice of occupational therapy to effect change worldwide.

## Appendix A: Logic Model



## Appendix B: Senior Application to SBFSSS

SENIOR PARTICIPANT \_\_\_\_\_

Age: \_\_\_\_\_

Gender: Female \_\_\_\_\_ Male \_\_\_\_\_ Neutral \_\_\_\_\_

Race: (Optional, for statistical research only)

Caucasian \_\_\_\_\_ African-American \_\_\_\_\_ Asian \_\_\_\_\_ Multi \_\_\_\_\_ Other \_\_\_\_\_

Email: \_\_\_\_\_

Phone: \_\_\_\_\_

Address: \_\_\_\_\_

Required forms:

\_\_\_\_\_ Medical clearance letter

\_\_\_\_\_ Home safety check

\_\_\_\_\_ School clearances

Checklist of Completed Assessments: (date)

Initial	Final	Assessment
		Activity Checklist
		Perception of Teens Questionnaire
		MEPSI: Generativity Vs. Stagnation or Integrity Vs. Despair
		Dartmouth COOP: adult version
		UCLA 3-question Scale of Loneliness

Top 3 Occupations: 1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_



### Appendix C: Student Application to SBFSSS

STUDENT PARTICIPANT \_\_\_\_\_

Age: \_\_\_\_\_

Gender: Female \_\_\_\_\_ Male \_\_\_\_\_ Neutral \_\_\_\_\_

Race: (Optional, for statistical research only)

Caucasian \_\_\_\_\_ African-American \_\_\_\_\_ Asian \_\_\_\_\_ Multi \_\_\_\_\_ Other \_\_\_\_\_

Email: \_\_\_\_\_

Phone: \_\_\_\_\_

Please attach a copy of your school schedule

Required forms:

\_\_\_\_\_ Parent/Guardian permission letter

\_\_\_\_\_ Teacher reference/permission

Checklist of Completed Assessments: (date)

Initial	Final	Assessment
		Activity Checklist
		Fraboni Scale of Ageism
		MEPSI: Self Identity vs. Confusion
		Dartmouth COOP: teen version
		Screen time/communication survey

Top 3 Occupations: 1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_











### Appendix D1: Modified Interest Checklist (1 of 4 pages)

Source: Interest checklist - moho.uic.edu. (n.d.). Retrieved from

















[http://moho.uic.edu/resources/files/Modified Interest Checklist.pdf](http://moho.uic.edu/resources/files/Modified%20Interest%20Checklist.pdf)

#### INTEREST CHECKLIST UK (Adapted Version)

Name: ..... Date of Birth: .....










1. Health and Fitness	Activity	Degree of Interest			
		Like 	OK 	Don't Like 	Want to try 
	Aerobics / Gym				
	Cycling				
	Running / Jogging				
	Rollerblading / Ice Skating				
	Swimming				
	Yoga / Tai Chi.....				
Other Health and fitness:					










2. Sports	Activity	Like 	OK 	Don't Like 	Want to try 
	Athletics				
	Basketball / Netball				
	Bowling				
	Cricket / Baseball / Rounders				
	Darts				
	Football / Rugby / Hockey				
	Golf				
	Martial Arts / Boxing / Fencing				
	Pool / Snooker				
	Spectator Sports				
	Table Tennis				
	Tennis / Squash / Badminton				
Other Sports:					

### Appendix D2: Modified Interest Checklist (page 2)

3. Creative	Activity	Like 	OK 	Don't Like 	Want to try 
	Crafts / Needlework				
	Fashion: Clothes / Hair / Cosmetics				
	Making music – incl. instrument, DJ'ing....				
	Model Building				
	Painting / Drawing (Art)				
	Photography				
	Pottery				
	Singing				
	Writing: letters / poems / stories				
	Woodworking – incl. Picture Framing, Furniture Restoration				
Other Creative:					

4. Productivity at home	Activity	Like 	OK 	Don't Like 	Want to try 
	Car Repair				
	Cooking / Baking				
	Gardening – incl. Indoor Plants				
	Mending / DIY				
	Pet ownership				
Other Productivity at home:					










5. Leisure at home	Activity	Like 	OK 	Don't Like 	Want to try 
	Board games – chess, scrabble etc.				
	Collecting eg. Stamp collection				
	Computing – games / pc / internet				
	Listening to music				
	Playing cards				
	Puzzles / Crosswords				
	Radio				
	Reading				
	Television / Video				
Other Leisure at home:					

6. Social	Activity	Like 	OK 	Don't Like 	Want to try 
	Clubs: Social / Nightclubs				
	Eating out				
	Faith-related activities				
	Inviting / visiting friends / family				
	Pubs / bars				
	Voluntary work				
Other social:					

### Appendix D3: Modified Interest Checklist (page 3)

7. Outdoor Pursuits	Activity	Like 	OK 	Don't Like 	Want to try 
	Bird watching / Wildlife				
	Camping				
	Climbing				
	Fishing				
	Horse riding				
	Walking				
	Water Sports incl. canoeing / rowing				
Other outdoor pursuits:					

8. Out and About	Activity	Like 	OK 	Don't Like 	Want to try 
	Bingo				
	Cinema				
	Concerts / Theatre				
	Dancing				
	Driving				
	Museums / art galleries				
	Places of interest / day trips				
	Shopping (incl. Markets)				
	Traveling / Holidays				
Other out and about:					

9. Educational	Activity	Like 	OK 	Don't Like 	Want to try 
	Antiques				
	Courses / adult education				
	History				
	Politics / Philosophy				
	Science				
Other educational:					

Occupational Therapist: \_\_\_\_\_ Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Appendix D4: Modified Interest Checklist (page 4)

INTEREST SUMMARY

Name:..... Date of Birth.....

Likes	Want to try

ACTION PLAN






	SHORTLIST	ACTION PLAN
1		
2		
3		

### Appendix E1: COOP/WONCA Health Charts – Adult (page 1 of 3)

This assessment has been known under various names including, the Dartmouth CO-OP Functional Health Assessment Charts. The following version for adults is listed under the above name and is free to use in this format. Source: Van Weel, C., König - Zahn, C., Touw – Otten, F.W.M.M., van Duijn, N.P., & Meyboom- de Jong, B. (1995). Measuring functional health status with the COOP/WONCA Charts, a manual. Retrieved from <http://www.ph3c.org/PH3C/docs/27/000150/0000103.pdf>






#### Overall health

During the past 2 weeks...  
How would you rate your health in general?

Excellent		1
Very good		2
Good		3
Fair		4
Poor		5

#### Daily activities

During the past 2 weeks...  
How much difficulty have you had doing your usual activities or tasks, both inside and outside the house because of your physical and emotional health?






No difficulty at all		1
A little bit of difficulty		2
Some difficulty		3
Much difficulty		4
Could not do		5

## Appendix E2: COOP/WONCA Health Charts – Adult (page 2 of 3)

### Physical fitness

During the past 2 weeks...






What was the hardest physical activity you could do for at least 2 minutes?

Very heavy, (for example) run, at a fast pace		1
Heavy, (for example) jog, at a slow pace		2
Moderate, (for example) walk, at a fast pace		3
Light, (for example) walk, at a medium pace		4
Very light, (for example) walk, at a slow pace or not able to walk		5

### Feelings

During the past 2 weeks...

How much have you been bothered by emotional problems such as feeling anxious, depressed, irritable or downhearted and sad?

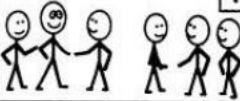
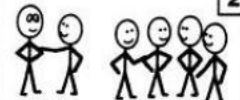



Not at all		1
Slightly		2
Moderately		3
Quite a bit		4
Extremely		5



Appendix E3: COOP/WONCA Health Charts – Adult (page 3 of 3)






Social activities

During the past 2 weeks...  
Has your physical an emotional health limited your social activities  
with family, friends, neighbours or groups?

Not at all		1
Slightly		2
Moderately		3
Quite a bit		4
Extremely		5

Change in health

How would you rate your overall health now compared to  
2 weeks ago?

Much better		1
A little better		2
About the same		3
A little worse		4
Much worse		5



## Appendix F: COOP/WONCA - Teens

Source: Wasson, J.H., Kairys, S.W., Nelson, E.C., Kalishman, N., Baribeau, P., & Wasson, E. (1995). Adolescent health and social problems, a method for detection and early management. Arch Fam Med. 4:51-56. Retrieved from <https://triggered.clockss.org/ServeContent?url=http://archfami.ama-assn.org%2Fcgi%2Fpreprint%2F4%2F1%2F51.pdf>

Physical Fitness			Emotional Feelings			School Work		
During the past month, what was the hardest physical activity that you could do for at least 10 minutes?			During the past month, how often did you feel anxious, depressed, irritable, sad, or downhearted and blue?			During the last month you were in school, how did you do?		
Very heavy (run, fast pace)		1	None of the time		1	I did very well		1
Heavy (jog, slow pace)		2	A little of the time		2	I did as well as I could		2
Moderate (walk, fast pace)		3	Some of the time		3	I could have done a little better		3
Light (walk, regular pace)		4	Most of the time		4	I could have done much better		4
Very light (walk, slow pace)		5	All the time		5	I did poorly		5

Social Support			Family Communications			Health Habits		
During the past month, if you needed someone to listen or to help you, was someone there for you?			During the past month, how often did you talk about your problems, feelings, or opinions with someone in your family?			During the past month, how often did you do things that are harmful to your health, such as: • smoke cigarettes or chew tobacco • have unprotected sex • use alcohol including beer or wine?		
Yes, as much as I wanted		1	All of the time		1	None of the time		1
Yes, quite a bit		2	Most of the time		2	A little of the time		2
Yes, some		3	Some of the time		3	Some of the time		3
Yes, a little		4	A little of the time		4	Most of the time		4
No, not at all		5	None of the time		5	All of the time		5

## Appendix G: Modified Erikson Psychosocial Stages Inventory (MEPSI)

### Identity Versus Role Confusion (teen)

Source: Darling-Fisher, C. & Kline Leidy, N. (n.d.). The Modified Erikson Psychosocial Stage Inventory (MEPSI). Retrieved from

<https://deepblue.lib.umich.edu/bitstream/handle/2027.42/111746/MEPSIGUI010.pdf?sequence=5&isAllowed=y>

We would like to know a little about you and how you view your situation. Here are some thoughts that most people have about themselves at one time or another. Please read each sentence and CIRCLE the number, on the scale of 1 (HARDLY EVER TRUE) to 5 (ALMOST ALWAYS TRUE), which shows how the sentence is true of you. Don't spend a lot of time thinking about your response. There are no right or wrong answers. Please do not omit any answers.

How often is this true of you?    Hardly ever true    Occasionally true    About half the time    Usually true    Almost always true

1. I change my opinion of myself a lot .....	1	2	3	4	5
2. I've got a clear idea of what I want to be ....	1	2	3	4	5
3. I feel mixed up .....	1	2	3	4	5
4. The important things in life are clear to me....	1	2	3	4	5
5. I've got it together.....	1	2	3	4	5
6. I know what kind of person I am.....	1	2	3	4	5
7. I can't decide what I want to do with my <u>life</u> .....	1	2	3	4	5
8. I like myself and I am proud of what I stand for.	1	2	3	4	5
9. I find I <del>have to</del> keep up a front when I'm with people .....	1	2	3	4	5
10. I don't really feel Involved.....	1	2	3	4	5

## Appendix H: Modified Erikson Psychosocial Stages Inventory (MEPSI)

### Generativity Versus Stagnation (Adult)

Source: Darling-Fisher, C. & Kline Leidy, N. (n.d.). The Modified Erikson Psychosocial Stage Inventory (MEPSI). Retrieved from

<https://deepblue.lib.umich.edu/bitstream/handle/2027.42/111746/MEPSIGUI010.pdf?sequence=5&isAllowed=y>

We would like to know a little about you and how you view your situation. Here are some thoughts that most people have about themselves at one time or another. Please read each sentence and CIRCLE the number, on the scale of 1 (HARDLY EVER TRUE) to 5 (ALMOST ALWAYS TRUE), which shows how the sentence is true of you. Don't spend a lot of time thinking about your response. There are no right or wrong answers. Please do not omit any answers.

How often is this true of you?    Hardly ever true    Occasionally ~~true~~    About half the time    Usually true    Almost always true

Rectangular Snip

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. I feel that I have left <u>my</u> mark on the world through my children/work .....         | 1 | 2 | 3 | 4 | 5 |
| 2. I spend a great deal of time thinking about myself.....                                    | 1 | 2 | 3 | 4 | 5 |
| 3. I have a sense that there is purpose to my life .....                                      | 1 | 2 | 3 | 4 | 5 |
| 4. I feel inadequate in <u>my</u> interactions with others.....                               | 1 | 2 | 3 | 4 | 5 |
| 5. It is important to me to feel that I have made a contribution in life .....                | 1 | 2 | 3 | 4 | 5 |
| 6. I have difficulty relating to people different from me...                                  | 1 | 2 | 3 | 4 | 5 |
| 7. I have discovered no purpose or mission in life...   | 1 | 2 | 3 | 4 | 5 |
| 8. I worry about how others perceive me.....  | 1 | 2 | 3 | 4 | 5 |
| 9. It is more important to work on behalf of those I care about than to work just for myself. | 1 | 2 | 3 | 4 | 5 |
| 10. I am proud of what I have accomplished in my life. ....                                   | 1 | 2 | 3 | 4 | 5 |

## Appendix I: Modified Erikson Psychosocial Stages Inventory (MEPSI)

### Integrity Versus Despair (Senior)

Source: Darling-Fisher, C. & Kline Leidy, N. (n.d.). The Modified Erikson Psychosocial Stage Inventory (MEPSI). Retrieved from

<https://deepblue.lib.umich.edu/bitstream/handle/2027.42/111746/MEPSIGUI010.pdf?sequence=5&isAllowed=y>

We would like to know a little about you and how you view your situation. Here are some thoughts that most people have about themselves at one time or another. Please read each sentence and CIRCLE the number, on the scale of 1 (HARDLY EVER TRUE) to 5 (ALMOST ALWAYS TRUE), which shows how the sentence is true of you. Don't spend a lot of time thinking about your response. There are no right or wrong answers. Please do not omit any answers.

How often is this true of you?	Hardly ever true	Occasionally true	About half the time	Usually true	Almost always true
1. As I look over my life, I feel the need to make up for lost time .....	1	2	3	4	5
2. I feel that I have the wisdom and experience to be of help to others. ....	1	2	3	4	5
3. I have many regrets about what I might have become...	1	2	3	4	5
4. I am afraid of growing old...	1	2	3	4	5
5. My achievements and failures are largely a consequence of my own actions.....	1	2	3	4	5
6. There's a lot about my life I'm sorry about.....	1	2	3	4	5
7. I am disgusted by other people.....	1	2	3	4	5
8. I feel at peace with <u>my</u> life.....	1	2	3	4	5
9. If I could live my life over, there is little I would change.	1	2	3	4	5
10. As I look back over my life, I realize my parents did the best they could for me .....	1	2	3	4	5

## Appendix J: Perception of Teens Questionnaire

Administered to seniors regarding their feelings about teens. Lynda Lemisch, author

Next to each item, select the number from this scale that best describes your answer:

1 = strongly disagree	2 = disagree	3 = agree	4 = strongly agree
-----------------------	--------------	-----------	--------------------

1. Many teens are not responsible \_\_\_\_
2. Many teens are dependent on their electronic devices \_\_\_\_
3. Teens are interesting, you just need to get to know them \_\_\_\_
4. Many teens are spoiled \_\_\_\_
5. Many teens find time to communicate with adults \_\_\_\_
6. Many teens are careless \_\_\_\_
7. Many teens are ignorant \_\_\_\_
8. Many teens are not interested in talking with the older generation \_\_\_\_
9. Teens' opinions are important in society \_\_\_\_
10. Many teens are rebellious \_\_\_\_
11. Teens can be creative \_\_\_\_
12. Many teens cannot communicate in person \_\_\_\_
13. Many teens are disrespectful \_\_\_\_
14. Teens are interested in what the older generation has been through \_\_\_\_
15. Most teens would help someone in trouble \_\_\_\_
16. A lot of teens should not be allowed on the road \_\_\_\_
17. Teens seem to look out only for themselves \_\_\_\_
18. I think teens in high school do a lot of drugs \_\_\_\_
19. Teens today have a lot on their plates \_\_\_\_
20. I am a bit intimidated to talk to a teenager \_\_\_\_

Scoring: # 3, 5, 9, 11, 14, 15, 19 are reverse scored items. A higher score indicates ageism against teens.

### Appendix K: Fraboni Scale of Ageism

A self-report to be administered to seniors regarding their feelings about teens. Source:

Fraboni, M., Saltstone, R., Cooper, D., & Hughes, S. (1990). The Fraboni Scale of Ageism. *Canadian Journal on Aging*, 9(1), 56-66.

Next to each item, place the number that best describes your answer based on the following scale: 1= strongly disagree 2= disagree 3= agree 4= strongly agree

\* Items are reverse-scored.

1. Teenage suicide is more tragic than suicide among the old.
2. There should be special clubs set aside within sports facilities so that old people can compete at their own level.
3. Many old people are stingy and hoard their money and possessions.
4. Many old people are not interested in making new friends preferring instead the circle of friends they have had for years.
5. Many old people just live in the past.
6. I sometimes avoid eye contact with old people when I see them.
7. I don't like it when old people try to make conversation with me.
- \*8. Old people deserve the same rights and freedoms as do other members of our society.
9. Complex and interesting conversation cannot be expected from most old people.
10. Feeling depressed when around old people is probably a common feeling.
11. Old people should find friends their own age.
- \*12. Old people should feel welcome at the social gatherings of young people.
13. I would prefer not to go to an open house at a senior's club, if invited.
- \*14. Old people can be very creative.
15. I personally would not want to spend much time with an old person.
16. Most old people should not be allowed to renew their driver's licenses.
17. Old people don't really need to use our community sports facilities.
18. Most old people should not be trusted to take care of infants.
19. Many old people are happiest when they are with people their own age.
20. It is best that old people live where they won't bother anyone.
- \*21. The company of most old people is quite enjoyable.
- \*22. It is sad to hear about the plight of the old in our society these days.
- \*23. Old people should be encouraged to speak out politically.
- \*24. Most old people are interesting, individualistic people.
25. Most old people would be considered to have poor personal hygiene.
26. I would prefer not to live with an old person.
27. Most old people can be intimidating because they tell the same stories over and over
28. Old people complain more than other people do.
29. Old people do not need much money to meet their needs.



### Appendix L: UCLA 3 Question Loneliness Scale

Source: Hughes, M. E., Waite, L. J., Hawkley, L. C., & Cacioppo, J. T. (2004). A short scale for measuring loneliness in large surveys. *Research on Aging*, 26(6), 655-672.

doi:10.1177/0164027504268574

Lead-in and questions are read to respondent.

The next questions are about how you feel about different aspects of your life.

For each one, tell me how often you feel that way.

Question	Hardly Ever	Some of the Time	Often
First, how often do you feel that you lack companionship:	1	2	3
How often do you feel left out:	1	2	3
How often do you feel isolated from others:	1	2	3

The score is the sum of all items.

## Appendix M: Appendix M: Teen Use of Time

Authored by Lynda Lemisch.

### Questionnaire for Teens

How often do you communicate with the following, outside of school?

	Never	Hardly Ever	Sometimes	Often	Most of the time/always
Peers/friends electronically					
Peers/friends on the phone					
Peers/friends in person					
Family members electronically					
Family members on the phone					
Family members in person					
Senior citizens electronically					
Senior citizens on the phone					
Senior citizens in person					

How often during your non-school time, would you say you were engaged in the following?

	Never	Hardly Ever	Sometimes	Often	Most of the time/always
Meeting up with friends					
On cellphone (various activities)					
Working a job/doing chores or homework					
Reading printed material					
Watching TV					
Using computer					
Physical activity/sports/gym					
Non-electronic hobby – like knitting or building, etc.					
Other:					



Considering the use of your cell phone, how would you divide up your time?

	Never	Hardly Ever	Some- times	Often	Most of the time/always
Texting, connecting with friends					
Talking					
Listening to music					
Taking/viewing/creating photos and videos					
Playing games					
Other:					

How do you consider your time on your cell phone?

Hardly use it – emergencies only	Use it some of the time	Just right	Somewhat excessive	Very excessive

If you would like to change your time using a cell phone, what do you think is appropriate?

No, I don't want any changes.	Putting it away for certain activities	Cutting down specific activities like games or social media.	Not having it in my room at bedtime.	Cutting down by an hour of screen time

### **Appendix N: Satisfaction Survey**

Administered to all program participants, internal (operations) and external (outside support) stakeholders. Authored by Lynda Lemisch.

#### Satisfaction Survey

Your title (please circle):

Participant      Transportation      Program assistant      Volunteer      Teacher      Referring  
agency

Please rate the following factors according to this scale:

Extremely Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Extremely Satisfied
1	2	3	4	5

Overall satisfaction with the program?

Satisfaction with your role?

Communication of important information to you?

What are the program's strengths from your viewpoint?

What improvements could you suggest?

## **EXECUTIVE SUMMARY**

### **Introduction**

Imagine the first day of anticipating something new. Looking out the window, waiting and wondering. There it comes, around the corner, traveling down the street. There is no mistaking the big yellow school bus. It makes a stop at your house. It's your turn, and you are 83 years old.

You are not getting on the school bus because it is difficult for you to walk, leave the house and walk down the driveway. Instead, a high school student steps off the bus to visit with you. You don't even know what the student looks like, but you know that she loves to paint; she is an artist like you. Company's coming and you're going to be doing something you both love. This is the program called School Buses for Students Supporting Seniors (SBFSSS).

### **Project Overview**

SBFSSS is a program in which school buses transport high school students to the homes of homebound seniors, for social visits based on common interests and activities. These ways of spending time engaged in valued activities are called occupations. Research on other intergenerational programs have been proven to be beneficial to both participants, young and/or old (Andreoletti & Howard, 2018; Chippendale & Boltz, 2015; Gruenewald et al., 2016; Murayama, 2014; Nicolson & Shellman, 2013; Thompson & Weaver, 2016).

With school board authorization, school buses will transport 11th and 12th grade students who have both teacher and parental approval, from school to the homes of

seniors who have met criteria including home safety and background checks, in accordance with school policies. Imagine a student during his usual history class time, visiting a senior who fought in the Korean War, or the violinist visiting a fellow senior musician during orchestra practice time. A typical SBFSSS program can last 6-12 weeks of weekly visits. Several students can be assigned to one senior, limiting missed class time.

SBFSSS addresses current issues facing these two generations. The baby boomers are aging, resulting in an explosive growth in the population of seniors, 65+ years old (Colby & Ortman, 2014), the majority of whom want to stay in their own homes for as long as possible; this is called aging in place (Barrett, 2014). However, with the inevitable loss of the ability to drive, and decline in function and mobility, seniors aging in place become increasingly homebound. When combined with the natural attrition of friends and family, the probability of social isolation is great.

Social isolation has critical health implications. A group of 6,500 seniors reported that social isolation (and loneliness) affected their health and well-being (Step toe, Shankar, Demakakos & Wardle, 2013). In a nationwide study of over 16,000 seniors, researchers confirmed that social isolation negatively affects health, similarly ranking it with smoking, obesity, hypertension and hypercholesterolemia as a predictor of mortality (Pantell, Rehkopf, Jutte, Syme, Balmes, & Adler, 2013; Step toe, Shankar, Demakakos & Wardle, 2013).

Social participation is a primary occupation (valued activity) which occupational therapists (OTs) address in their holistic view of a person's overall health and well-being.

OTs analyze the environments in which occupations occur. For seniors, there are opportunities to socialize within the community, such as senior centers, religious organizations, restaurants, etc. However, these places require mobility from the home and transportation to the site. With aging and decline in mobility, seniors become more homebound and less able to access these sites, placing them at greater risk for social isolation. Addressing socialization participation in the home environment is distinctly within the domains of OT practice.

For the teenage generation, the use of technology, mobile devices, and social media has also seen great growth (Common Sense Media, 2015). Notwithstanding the knowledge, accessibility, and social benefits of these phenomena, increased screen time and cell-phone use are linked to a decrease in the psychosocial well-being of teens (Twenge, Martin, & Campbell, 2018). Objectively, time spent with parents and adults is less (Lee, 2009; Subrahmanyam, & Greenfield, 2008). Teens turn to their own peer group “instantly” for quick responses to problems, feedback, and resources, narrowing their outlook and focus; Strom and Strom (2015) label this peer cohesiveness, “age-segregated communication.” Corporate employers report concerns regarding reduced communication skills of young adults, required for entry into the workforce, where teamwork is necessary with other generations (Fischer, 2013). OTs distinctly address occupational balance. If excess engagement in certain occupations is causing dysfunction, OTs are skilled to assist in achieving occupational balance. Thus, both isolation and segregation societal issues impact the health and well-being of these two generations. An OT mediated SBFSSS program can be an effective intervention for the community at

large.

### **Key Findings**

The intergenerational program aspects of SBFSSS are evidence based; yet, SBFSSS is unique in its use of common occupations as the basis for engagement between generations. Choice and matching of similar occupations will enhance program benefits. Lack of choice in previous intergenerational programs has shown to be a negative factor (Herrmann, Sipsas-Herrmann, Stafford, & Herrmann, 2005). In addition, SBFSSS home visits will uniquely be of a social nature, in contrast to the traditional home care visits of a medical nature, typically performed by health professionals. SBFSSS visits will be co-partner (“equals”), mentor/mentee or mentee/mentor based according to participants’ desires.

Improved knowledge of the other's generation (reduced ageism stereotypes), reduced seniors' feelings of social isolation, improved teenage non-peer communication skills, and overall improved health and well being are all anticipated benefits of SBFSSS based on pre and post program assessments. Some previous studies tended to assess intergenerational benefits to one of the generations instead of both. SBFSSS studies and promotes benefits to both generations.

### **Recommendations**

Support, authorization, and funding for SBFSSS are strongly recommended and graciously appreciated. This is a program that uses social capital (seniors and teens), low cost occupations, and existing resources (school buses) to provide health benefits to the community. The current school district-wide implementation is the model program

from which other districts can follow, nationally and globally. After all, school buses, seniors aging in place and teens with cell phones are everywhere.

### **Conclusions**

“The wheels on the bus go round and round...all through the town” (Mills, 1939). School buses (drivers) can access all homes in the district, including those of homebound isolated seniors, along their routes. Building community through service is a school district mission and requirement for graduation. SBFSSS is a universal intergenerational program which can address social isolation of seniors and age-segregated communication issues of teens. The positive health and well-being outcomes for both generations are effective, efficient, and equitable; there is occupational justice in allowing homebound seniors access to participate in valued social activities.

## FACT SHEET



### School Buses for Students Supporting Seniors (SBFSSS)

Lynda Lemisch, MS, OTR/L, OTD candidate

*Imagine sitting at the window, looking, waiting in anticipation. There is no mistaking the big yellow school bus. It stops at your house. At 83 years old, limited mobility hinders you from getting on board. Instead, a high school student emerges from the bus and makes her way to your door. Company's here. Time for painting ... something you both love to do.*



Photo: <http://321-siwebvarnish.newscyclecloud.com/apps/pbcs.dll/article?AID=/20161212/NEWS01/161219998/-1/NEWS/High-schoolers-do-art-with-senior-citizens>

This is School Buses for Students Supporting Seniors, an intergenerational program in which high school buses transport students to the homes of isolated, aging-in-place seniors for social visits focused on common occupations.

### SBFSSS: Addresses Current Issues

SBFSSS brings attention to two societal trends affecting teens and seniors, impacting their health and well-being.

#### Teens

- Great growth in cell phone/social media use<sup>1</sup>
- Own cohort - immediate source for problem solving and reference<sup>2</sup>
- "Age-segregated communication"<sup>2</sup>
- Less time communicating with adults, seniors,<sup>3</sup> may affect work-readiness as young adults<sup>4</sup>
- Increased screen time related to increased mental health issues, ages 18-20<sup>5</sup>

#### Seniors

- Great growth in population of those 65+<sup>6</sup>
- Majority desires to age-in-place in own homes<sup>7</sup>
- With age, decline in mobility, loss of driving
- Increase in homebound status
- Natural attrition of friends and family
- High isolation risk<sup>8</sup>
- Social isolation: negatively affects health<sup>9</sup>
- Social isolation: predictor of mortality<sup>9</sup>

### SBFSSS: Using Evidence to Move Uniquely Forward

- Intergenerational program benefits: improved well-being, overall health and sense of purpose.<sup>10</sup>
- Most intergenerational programs occur at senior centers or schools, where travel by seniors is needed.<sup>11</sup>
- Lack of choice and structured activities hindered full benefits of the intergenerational experience.<sup>12</sup>
- Most visits to the homes of isolated seniors are medical, addressing physical needs<sup>13</sup>.

### SBFSSS and OT: Together Making a Difference

SBFSSS takes community social activities to the homebound senior, eliminating occupational injustice. SBFSSS is client-centered and choice driven with OTs coordinating and adapting valued occupations as the common ground for the intergenerational social relationship. Teens and seniors also choose what type of visit is desired: co-partners, mentor/mentee or mentee/mentor. SBFSSS can improve occupational balance, and over health and well-being of two generations of participants.



## SBFSSS: Program Components & Implementation

With school board and high school administration authorization, a successful initial pilot program of 2-3 bus routes can lead to district-wide implementation.

<p><b>Student Participants</b></p> <ul style="list-style-type: none"> <li>• 11<sup>th</sup> and 12<sup>th</sup> grade volunteers</li> <li>• Have parental permission and teacher references</li> <li>• Commit to completing any missed class work</li> <li>• Meet community service requirement to graduate</li> <li>• Have enabling schedules</li> <li>• Identify 3 valued occupations</li> </ul>	<p><b>Senior Participants</b></p> <ul style="list-style-type: none"> <li>• Aging in their own homes</li> <li>• Referred from home health or senior agencies, self, primary care physicians, family, or friends</li> <li>• Have homes assessed for safety of visitors</li> <li>• Have school district &amp; medical clearances</li> <li>• Identify 3 valued occupations</li> </ul>
<p><b>Program Operations</b></p> <ul style="list-style-type: none"> <li>• Staff: OT director, assistant, bus drivers, volunteers</li> <li>• Twelve 35-45 minute weekly visits (school year)</li> <li>• Pre and post assessments assess effectiveness</li> <li>• 8 houses/bus route: drop off, circles back for pickup</li> <li>• several students matched to one senior if needed</li> </ul>	<p><b>Program Support &amp; Funding</b></p> <ul style="list-style-type: none"> <li>• Teens &amp; seniors are social capital</li> <li>• School district provides buses, computers, drivers</li> <li>• County, private, grants for OT administrative costs</li> <li>• Local businesses/bank donations</li> <li>• SBFSSS manual &amp; training available for purchase</li> </ul>

## SBFSSS: Potential Program Benefits & Down the Road Applications

- Improved knowledge of each other
- Reduced social isolation in seniors
- Increased multigenerational communication skills in teens
- Improved self-efficacy
- Improved health and well-being



- Teens with cell phones, seniors aging-in-place, and school buses and routes are universal.
- In cities, rural areas, suburbs
- SBFSSS can improve community health locally, nationally, globally.

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**SBFSSS: universal issues, resources and solutions. Think globally, act locally.**

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**CURRICULUM VITAE**

